

SDMS US EPA REGION V -1

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147752
0000002

Steven M. Christenson
Senior Attorney
Law Department

January 31, 1997

VIA OVERNIGHT EXPRESS

Mr. Lawrence W. Eastep
Illinois Environmental Protection
Agency
2200 Churchill Road
Springfield, Illinois 62706

VIA OVERNIGHT EXPRESS

Ali Hyderi, Esq.
Office of Illinois Attorney General
Environmental Bureau
100 W. Randolph Street - 11th Floor
Chicago, Illinois 60601

Re: Evergreen Manor Site
IEPA No. L-2010-400015 Winnebago County

Dear Messrs. Eastep and Hyderi:

I. Introduction

Please allow this letter and enclosures to serve as the response of Ecolab Inc. (Ecolab) to the Illinois Environmental Protection Act Section 58.9(b) "Notice" letter dated September 30, 1996 directed to Ecolab by the Illinois Environmental Protection Agency (IEPA or Agency) and to the related letters dated October 28, 1996, December 12, 1996, and January 14, 1997 from the Illinois Attorney General (IAG).

As you know, Ecolab had been granted an extension of time until February 3, 1997, to respond. The extension was granted, in part, to enable Ecolab, its environmental consultants (Conestoga-Rovers & Associates), and its attorneys (Johnson & Bell, Ltd.) to review volumes of documents made available to Ecolab following FOIA requests served upon the IEPA and other agencies. (Numerous documents, however, have been withheld or redacted.) In further consultation with the Agency, Conestoga-Rovers & Associates (CRA) performed water level measurements and sampling to facilitate Ecolab's response. Finally, interviews of current and former Ecolab employees at the Ecolab facility near Highway 251 and Rockton Road in Roscoe, Illinois were conducted.

After careful analysis, Ecolab and CRA conclude that Ecolab has not contributed to the alleged trichloroethylene (TCE) and other volatile organic compound (VOC) contamination at the Evergreen Manor Site. Accordingly, Ecolab denies any and all liability in connection with the Evergreen Manor Site based upon the Illinois Environmental Protection Act, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or any other statutory or common law theory.

As discussed in further detail below, IEPA's preliminary analysis appears to have overlooked the following facts:

1. TCE was not used at the Ecolab facility;
2. TCE has never been detected in groundwater or soils beneath the Ecolab facility;
3. Small amounts of inhibited 1,1,1-trichloroethane (1,1,1-TCA) and tetrachloroethylene (PCE) were used at the earliest in approximately 1975-1978 and at the latest in approximately 1991 at the Ecolab facility -- too late in time for any hypothetical spills to migrate two miles from Ecolab to Evergreen Manor by 1990, when the contamination was discovered;
4. There is no evidence of any solvent spills or improper disposal at Ecolab, as IEPA's own investigators concluded when evaluating the nearby Warner Electric contamination in 1983;
5. As described in the enclosed CRA report, the groundwater underlying the Ecolab property does not flow directly toward the Evergreen Manor Site subdivisions; and
6. As described in the CRA report, other documented sources of TCE in soil and groundwater are likely sources of the TCE detected in the Evergreen Manor Site area.

Given the circumstances, it is inappropriate for IEPA to seek to compel Ecolab's installation of an alternative water supply system for the Evergreen Manor area to address a TCE-related risk with no nexus to Ecolab's current or historical operations. Ecolab respectfully requests that the IEPA withdraw the Section 58.9(b) "Notice" to Ecolab as well as IEPA's request that Ecolab perform certain remedial activities.

II. No Solvents Were Disposed Of On-site By Ecolab

As background, some history regarding the Ecolab plant at Highway 251 and Rockton Road may be helpful. The plant was built in the late 1950s by Klenzade Products, Inc. Economics

Laboratory, Inc. (now Ecolab) acquired Klenzade and the plant in August 1961. From the beginning of its operation through approximately July 1974, only soaps and detergents for the food industry were made at this plant. No degreasing operations were conducted. To the best of our knowledge, no TCE, 1,1,1-TCA, or PCE solvents were used at the plant during this time period.

In 1975, the plant began making cleaning equipment such as detergent dispensers, rather than soaps and detergents. Some time after the mechanical equipment plant began operation in 1975, a 120-gallon vapor degreaser that used inhibited 1,1,1-TCA was installed. The December 1983 air permit application indicates that it was a Baron/Blakeslee model HL-600. Sludge from the degreaser and spent solvent were always properly disposed of off-site. No spills or improper disposal of the solvent took place.

While we do not have complete documentation of every off-site disposal shipment during 1975 - 1983, we believe the solvent waste was picked up by Interstate Pollution Control of Rockford, Illinois, U.S. Ecology, and/or McKesson Chemical. During 1987 - 1990, Solvent Systems International of West Dundee, Illinois recycled the solvent on-site and collected the still bottoms for off-site disposal. Other off-site disposal instances are documented in Ecolab's Section 104(e) responses dated September 1995 and October 1995. This letter and enclosures supplement Ecolab's prior responses to the IEPA's CERCLA Section 104(e) "Information Request" letters dated July 20, 1995 and September 28, 1995.

More importantly, Ecolab has used only small amounts of solvent material. First, no TCE (the primary contaminant of concern at the Evergreen Manor site) has ever been used at the Ecolab plant to the best of our knowledge. Second, as indicated in the enclosed traveling requisition form, Ecolab purchased only 18 drums of 1,1,1-TCA during 1984 - 1991. In 1991, Ecolab stopped using solvents entirely. While we have not located purchase records covering 1975 - 1983, similar operations were conducted during that time. Third, Ecolab used nominal amounts of three other solvents: Magnus No. 2, which contained approximately 30% 1,1,1-TCA; Magnus No. 5, which contained approximately 55% tetrachloroethylene or PCE; and Viking Chemical Safe-Solv, which contained 25% PCE. Material Safety Data Sheets (MSDS) for these products are enclosed. The traveling requisition form for Safe-Solv and invoices for five drums of Safe-Solv are attached, which document the only purchases of this product by Ecolab. Like the 1,1,1-TCA from the vapor degreaser, these materials were always disposed of off-site when spent. In May 1987, the vapor degreaser was removed from service as confirmed by Ecolab's letter to the Agency dated November 18, 1987. In 1991, the plant stopped using solvents in parts washers altogether.

In sum, Ecolab did not use TCE, the primary contaminant of concern at the Evergreen Manor site. By way of comparison, Warner Electric purchased TCE by the 8,000 gallon tank, Regal-Beloit used approximately 12 drums of TCE (660 gallons) at a time prior to February 1982, according to IEPA's investigative memorandum dated May 26, 1983 (attached), and TCE was found in the AAA/Waste Management well as early as 1983. TCE has never been observed in the soil or groundwater underlying Ecolab's property. Ecolab used comparatively small amounts of 1,1,1-TCA and PCE and always disposed of any such waste off-site at an approved disposal facility. Consistent with the IEPA's conclusions in the May 26, 1983 investigative memorandum, even today there is "no evidence of chlorinated solvent mismanagement" at Ecolab.

III. Ecolab's December 1979 Detergent Remediation Is Unrelated To The Solvent Contamination

At the October 24, 1996 meeting, your summary of the case against Ecolab appeared to be based primarily on the fact that Ecolab used some 1,1,1-TCA and PCE solvents and that Ecolab conducted an IEPA-approved cleanup of a former wastewater lagoon on its property in December 1979. As discussed above, Ecolab's use of small amounts of chlorinated solvents other than TCE does not support a conclusion that there were spills or improper disposal of such materials. Likewise, Ecolab's cleanup of materials from the manufacture of soap and detergents before 1975 does not support a conclusion that solvent contamination resulted -- no 1,1,1-TCA, TCE, or PCE solvents were used or disposed of at the property in the manufacture of soaps and detergents. IEPA's own soil monitoring data confirms this fact.

The manufacturing of soaps and detergents, obviously, did involve the use of certain caustics, such as sodium hydroxide, that are unrelated to 1,1,1-TCA, TCE, and PCE solvents. As documented by the test results attached to the August 6, 1980 IEPA letter, the sludges in the former wastewater lagoon contained elevated levels of certain metals, including phosphorus, zinc, nickel, iron, manganese, and chromium. The enclosed report dated December 27, 1979 describes the cleanup of soap and detergent residue in detail.

You have further provided field notes by IEPA staff dated December 11, 1979 that refer to a "chemical odor" without any further description. The Special Analysis Forms (attached to the August 6, 1980 letter) prepared by IEPA's Charles Corley describes the actual samples collected in December 1979 by IEPA staff. These more specific forms refer only to the metals and caustics resulting from the soap and detergent manufacturing as being at issue. The odor of cleaning products associated with the December 1979 remediation of the wastewater lagoon in no way suggests that chlorinated solvents were disposed of in the wastewater lagoon. Any odor during the excavation was a caustic or alkaline odor from soap production -- not solvents.

IV. Available Environmental Data Confirms That Ecolab Did Not Contribute To The Chlorinated Solvent Contamination At Evergreen Manor

Enclosed for your information is a report entitled "Contaminant Source Evaluation - Evergreen Manor Site" prepared by CRA in January 1997. Ecolab assumes that the IEPA is familiar with the credentials and experience of CRA with regard to environmental matters in general and groundwater contamination problems in particular.

Without repeating the information presented in the CRA report, Ecolab wishes to highlight several points:

1. The December 1996 test results found no evidence of groundwater contamination to suggest that Ecolab's property is an ongoing contaminant source. In short, Ecolab's property is not a contaminant source.
2. TCE contamination has been documented in the soil and groundwater at both the AAA/Waste Management and Regal-Beloit properties;
3. TCE has never been observed in soils or groundwater at Ecolab;
4. Given the west-southwesterly groundwater flow direction, Ecolab is not directly in line with the contaminant plume detected at Evergreen Manor;
5. Based on the groundwater flow velocity, any hypothetical discharge on the Ecolab property must have taken place more than 25 years before 1990 to reach Evergreen Manor -- at least ten years before the earliest date that Ecolab began using 1,1,1-TCA and PCE in approximately 1975-1978; and
6. Warner Electric remains a possible source of at least a portion of the contamination at Evergreen Manor. At the October 24, 1996 meeting, IEPA staff assigned to the Evergreen Manor project indicated that they had not fully reviewed the Warner Electric file. Given the 10,000 ppb-plus TCE contamination levels found a few hundred feet east of the Evergreen Manor area, surely some further investigation of that potential source is warranted. Indeed, the IEPA memorandum dated January 9, 1991 to T. Ayers suggests that pumping at the relatively new wells in Evergreen Manor may have pulled contamination in that direction. Moreover, the very high TCE concentrations at Warner Brake may have resulted in contamination at Evergreen Manor by diffusion.

V. Scope of Work Comments

The IAG's letter dated December 12, 1996 specifically requested comments on the draft Scope of Work (SOW) provided by the IEPA's letter dated November 1, 1996. Given that Ecolab is not a liable party, our comments are limited.

We note, however, that the proposed remedial design/remedial action (RD/RA) work plan and remedial investigation/feasibility study (RI/FS) work plan (to be followed by a potential second RD/RA work plan) is unnecessarily complicated and is not a cost-effective method of addressing the alleged TCE risk. A more streamlined approach relying on natural attenuation and biodegradation may well be appropriate. As you know, RI/FS procedures, RD/RA plans, and National Priority List (NPL) ranking requirements were not imposed at the Warner Electric site despite the more extensive TCE contamination there. To the extent that an alternative water supply may be warranted, the Illinois Department of Public Health or the IEPA might look to the developer(s) of the subdivisions to install a potable water supply consistent with Winnebago County zoning standards.

VI. There Is No Basis To Impose Liability On Ecolab

As discussed above, there is no factual basis to conclude that Ecolab contributed to the contamination at Evergreen Manor. Moreover, there is no legal basis to impose further costs on Ecolab under federal or Illinois law.

As you know, last year the Illinois legislature amended Section 58.9 to the Illinois Environmental Protection Act, 415 ILCS Section 5/58.9, to eliminate claims for joint and several liability at multiple PRP sites. Instead, the applicable legal standard of liability is now based on the proportionate degree of responsibility that can be attributed to a particular potentially liable party. For Ecolab, that percentage is zero.

Ecolab never used TCE, the only contaminant exceeding MCLs at Evergreen Manor and arguably warranting further remedial action. There is no evidence of spilling or improper disposal of 1,1,1-TCA or PCE solvents by Ecolab. The December 1996 monitoring well results from groundwater samples collected on the Ecolab property were generally within levels that are considered safe to drink under the Safe Drinking Water Act. In short, Ecolab is not a source of the alleged solvent contamination. If the State seeks to pursue issuing an administrative order or other adversarial legal action against Ecolab, we hereby request that the State proceed to make the allocation pursuant to § 58.9(c) before undertaking further enforcement measures.

While your correspondence refers primarily to Illinois state law, you have suggested that the Agency may request enforcement action by the U.S. Environmental Protection Agency pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). As you are aware, the U.S. EPA previously declined IEPA's request to pursue federal investigation of the Evergreen Manor site due to the low levels of contamination detected at the site. Under U.S. EPA's policy toward landowners, like Ecolab, that have had subsurface migration of contaminants onto their property from elsewhere, the U.S. EPA generally refrains from enforcement action. Policy Toward Owners of Property Containing Contaminated Aquifers, 60 Fed. Reg. 34,790 (July 3, 1995). Given this policy, we would not expect U.S. EPA to pursue action against Ecolab.

Moreover, to the extent that IEPA seeks to pursue a course of action under federal law, you should be aware of the U.S. District Court's decision in U.S. v. Olin Corp., 927 F. Supp. 1502 (S.D. Ala. 1996), in which Judge Hand ruled that CERCLA is inapplicable to events that took place before December 1980. As noted above, the groundwater flow velocity indicates that for contamination to have reached Evergreen Manor from the Ecolab plant approximately two miles away, the release would have had to commence before 1965. Because this time period is more than a decade before CERCLA's effective date and CERCLA has no retroactive applicability before 1980 under Olin, CERCLA's applicability to Ecolab is certainly questionable. See also Acushnet Co. v. Coaters Inc., 937 F. Supp. 988 (D. Mass. 1996) (PRP's waste must actually cause response costs to impose CERCLA liability).

VII. Conclusion

Ecolab is not a liable party under Section 22.2(f) of the Illinois Environmental Protection Act or under Section 107(a) of CERCLA. Accordingly, Ecolab requests that the IEPA withdraw the September 30, 1996 "Notice" letter with respect to Ecolab and refrain from referring this matter to the IAG for the filing of a formal complaint or to the U.S. EPA for enforcement against Ecolab.

As you know, Section 58.9(a)(2) specifically provides that in no event may the State of Illinois require the performance of remedial action by Ecolab because Ecolab neither caused nor contributed in any material respect to a release of a regulated substance on, in or under the Evergreen Manor Site that has been identified as the release to be addressed by IEPA's proposed remedial action. Specifically, the proposed Evergreen Manor Site remedial action appears to be in response to levels of TCE greater than the MCL of 5 ppb, whereas Ecolab neither caused nor contributed to any release of TCE. Parties other than Ecolab are the source of the TCE and other contamination at the Evergreen Manor site. As a result, any IEPA request that Ecolab perform a response action would be arbitrary and capricious.

Mr. Lawrence W. Eastep and Ali Hyderi, Esq.
January 31, 1997
Page 8

Finally, should the IEPA refuse to withdraw the Section 58.9(b) "Notice" of potential liability, Ecolab respectfully requests a detailed written explanation by the Agency and a meeting with appropriate IEPA and IAG personnel within sixty (60) days. By copy of this letter to Ms. Gobelman, Ecolab requests that this letter and the attachments be added to the administrative record.

Sincerely,



Steven M. Christenson

SMC/sfs

Attachments:

1. IEPA Memorandum re Warner Brake (May 26, 1983)
2. IEPA Memorandum re Warner Brake (Jan. 9, 1991)
3. Ecolab correspondence to IEPA (Dec. 27, 1979)
4. IEPA Correspondence to Ecolab (August 6, 1980)
5. MSDS for 1,1,1-TCA, Safe-Solv, Magnus #2, and Magnus #5
6. Traveling Requisition Forms for 1,1,1-TCA and Safe-Solv
7. Viking Chemical invoices for Safe-Solv (March 10, 1988 and June 8, 1988)
8. Solvent Systems International invoices for recycling (11/9/87, 7/15/88, 3/7/89, 7/14/89, 1/19/90, and 9/14/90)
9. Ecolab Air permit application (Dec. 2, 1983)
10. Ecolab correspondence to IEPA (Nov. 18, 1987)
11. CRA Report (Jan. 1997)

cc: Gerald E. Willman/IEPA
Paul R. Jagiello/IEPA
Diana D. Gobelman/IEPA
Frederick S. Mueller/Johnson & Bell
Richard G. Shepherd/Conestoga-Rovers & Associates

ATTACHMENT 1



DATE: May 26, 1983
TO: Division File
FROM: Pamela D. LoPinto *PD*
SUBJECT: Winnebago County LPC 20104010 Roscoe/Warner Electric Brake

This memo details investigations made of industries east of Hononegah Country Estates. Investigations were conducted to gather information regarding the types of waste materials generated and disposal methods utilized.

May 9

Economics Laboratories, Stateline Foundry, and Rockford Manufacturing Group were all visited. I was told by the receptionist at Economics Labs that no chemicals were handled. At the foundry I was told only Stan Christianson, President, could help me and that he was unavailable until May 16th. At RMG I was told to call Dick Alcock for an appointment.

May 11

I toured RMG with Dick Alcock. The small shop makes wire drawing machinery. Alcock showed me a letter from Mike Bacon dated 5/6 indicating that RMG's well contained 2 ppb 1-1-1, trichloroethane, 28 ppb trichloroethylene and 1 ppb tetrachloroethane. Eight drums of paint and thinner were stored, closed, on pallets outdoors. Two tanks of Stoddard solvent were observed - 10 gallons and 30 gallons. The 10 gallon tank is recycled monthly by Safety Kleen. The 30 gallon tank hasn't needed the solution changed. Alcock had Frinks sample the 8 drums two weeks ago and is also considering EWR for waste removal. I told Alcock that if the material in drums was hazardous he has been storing illegally.

May 12

Ken Bardo and I visited Forest City Gear, RMG, John Deere, Anderson Marine and Thelma Meuret's residence to deliver water sample results. At Forest City Gear it was suggested that we investigate Economics Laboratories further as the previous owner - Cleansaid - had used underground tanks. At RMG we met with Alcock and sampled two of the eight drums stored outside. Sample #1 was taken from a drum containing green paint on the bottom, clear liquid in the middle and a rust colored liquid on top. Sample #2 was taken from a drum with green paint on the bottom, oil in the middle and clear solvent on top.

We visited Economics Lab and met with Tom Grezek. Grezek said that Cleansaid sold the property in 1961. In 1975 the underground tank containing diesel fuel was emptied. Grezek knew of no other underground tanks. This facility manufactures cleaning systems for the food industry and uses 1,1,1-trichloroethane in vapor degreasing. We observed the open-top degreaser and one drum of sludge inside the plant. The solvent is recycled within the system and sludge is sent to McKesson Chemical. The outdoor underground tank area was inspected.

RECEIVED

JUN 15 1983

E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Ken and I proceeded to Regal Beloit where taps and dies are manufactured. We were told to call Mike Tate for an appointment.

May 17

Ken and I met with Mike Tate and two other gentlemen from Regal Beloit. The following information was gathered regarding materials used in the production of taps and dies:

1. Water soluble coolant is stored in an underground tank outdoors.

2. Grinding oil and coolant are filtered on site for reuse. The resultant sludge is stored in an AAA box for disposal. Approximately 10 yards/2-3 months are removed. During our visit drums of sludge were being emptied into the box. We were told that the sludge had been in storage because, while it was once marketable, it now must be land-filled and a permit had to be obtained.

3. 1,1,1-trichloroethane is used in degreasing prior to heat treating. In February of 1982 approximately 12 drums of trichloroethylene were removed by Safety Kleen so that the new solvent (1,1,1-trichloroethane) could be utilized. The drums were stored inside for a short period of time. No degreaser waste is generated now as the material is recycled. The vapor degreaser holds 2-3 drums of solvent.

4. Naptha spirits are used for cleaning and are recycled by Safety Kleen.

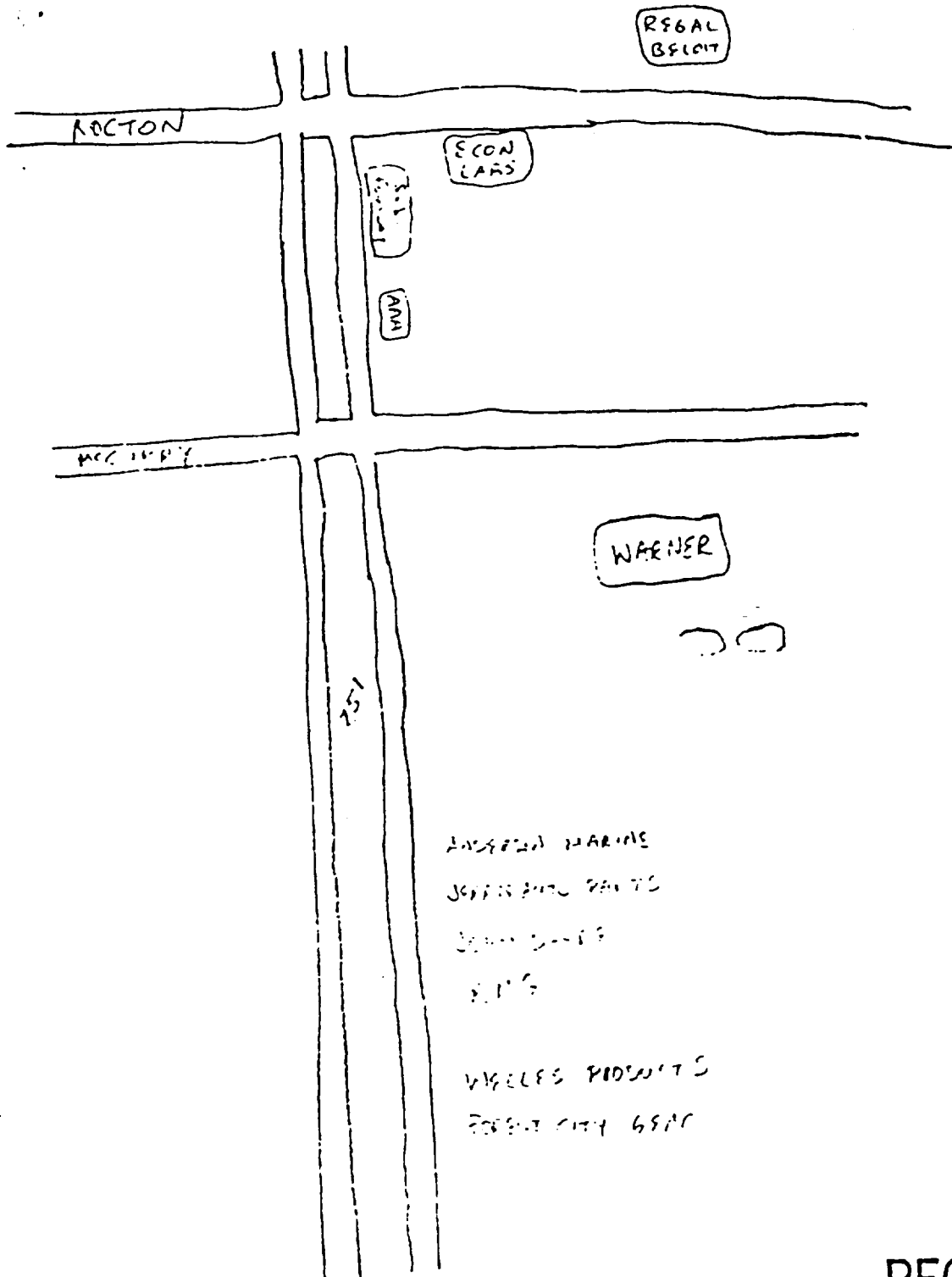
Ken and I suggested to Regal representatives that they have their water tested for volatile organics. Neither Ken nor I felt that this plant had any waste management problems.

As of the date of this memo Stateline Foundry and Armor Specialty have not been inspected. To summarize my investigations and previous investigations by Ken Bardo, there was no evidence of chlorinated solvent mismanagement at Forest City Gear, RMG, John Deere, Anderson Marine, Economics Labs, Regal Beloit, or Welles Products.

PDL:svf

cc: Rockford Region
-Heidi Hanson
-T. Cavanagh
-Sherry Otto
-M. Nienkerk

Attachment: Sketch



RECEIVED

JUN 15 1983

E.P.A. - D.L.P.C.
STATE OF ILLINOIS

IEPA-WBM
0016

ATTACHMENT 2



MEMORANDUM

Date: January 9, 1991

To: Terry Ayers, FSMU

From: Paul E. Takacs, FSMU

Subject: L2010400010 -- Winnebago County
Warner Electric -- Roscoe
Superfund/Technical Reports

This is to document conversations between myself and Bill Buller of USEPA-RCRA Enforcement in Region V concerning recent sampling of residential wells adjacent to the Warner Electric Site.

The Warner Brake & Clutch Company is located at Highway 251 and McCurry Road in Roscoe, Illinois just north of Rockford. This Site occupies approximately 94 acres and an estimated 7,000 people obtain drinking water from public and private wells within a three mile radius of the Site. Warner Electric has owned the Site since 1957. Substances which were used or generated at the facility include trichloroethene, methylene chloride, 1,1,1-trichloroethane, toluene, paint sludge and epoxy catalysts. The sources of contamination are widely believed to have been two on-site lagoons as a part of Warner's "sanitary wastewater treatment process".

In 1983, IEPA tested residential wells in the Hononegah Country Estates and Moore Haven subdivisions, located about 3,000 feet from the sources. This testing revealed TCE levels of up to 5,700 ppb as well as significant concentrations of 1,1,1-TCA and trans-1,2 dichloroethene. As a part of an agreement with the Illinois Attorney General, Warner Electric began providing bottled water to the affected homes and in 1984, constructed a community water supply system. All residences in what had been defined as the plume area were given the opportunity to hook up to this system. In addition, Warner agreed to remove approximately 16,000 tons of contaminated waste materials from the two on-site lagoons. The lagoons were then backfilled, capped with one foot of compacted clay and revegetated. With this source removal, it was expected that VOC concentrations within the 1200 foot by 6000 foot plume would decrease.

As contaminant levels remained nearly constant, USEPA pursued Warner to conduct an RI/FS pursuant to SARA after the Site was listed. It was decided to give USEPA the lead agency role since the former agreement between the Attorney General's Office included a covenant-not-to-sue stipulation. Stating that the problem had already been addressed, Warner proposed to Region V that the Site



either become a state lead Superfund site or that the Site should be deferred to RCRA. A 3008(h) order was executed on January 2, 1990, and the Site was taken off the NPL on August 30, 1990. The State was not a party to this agreement which called for pumping and treatment of contaminated groundwater only. IEPA was requested to comment on the Corrective Measures Plan, however since Warner had not submitted a post-closure permit application or an equivalency demonstration (see July 6 memorandum), a review was not possible.

On January 8, 1991, I was notified that the adjacent Evergreen Subdivision southwest of the plume area (see attached map) had been tested by IDPH on December 11. The results showed very high levels of TCE (averaging about 27ppb; 75ppb max.) and 1,1,1-TCA. Significant amounts of 1,1 DCE, 1,1 DCA, c-1,2 DCE, 1,1,2-TCA and PCE were also detected. USEPA's Superfund Emergency Response Unit was scheduled to have completed further testing at the neighborhood on January 4. Roger Ruden of IDPH will hold a meeting on January 9 to explain IDPH's results to residences that had been tested.

Groundwater flow paths had been established between the source area and the Rock River. The indications were that groundwater flows in a southwesterly direction (Wehrmann, 1984). When the study was completed, the Evergreen Subdivision had not yet been fully occupied and further residential development in this area was not considered. The Evergreen Subdivision with over 600 homes could have caused a cone of depression significant enough to have pulled contaminants into the neighborhood. Although similar contamination exist at the Warner Site, a flow path which considers heavy usage of groundwater at the Evergreen Subdivision must be considered. The possibility that similar waste found at other locations should also be studied, however it would be difficult for IEPA to enforce any investigation on Warner since IEPA is not a party to the 3008(h). I would recommend close coordination with USEPA in this matter.

Attachments: Sample locations and results

cc: Bob Wengrow
Tom Long, IDPH (w/o attachment)
Roger Ruden, IDPH (w/o attachment)
Stan Black (w/o attachment)
Greg Michaud
Paul Jagiello
Jim Janssen
Charles Zeal
Gary King
Bill Child
Division File

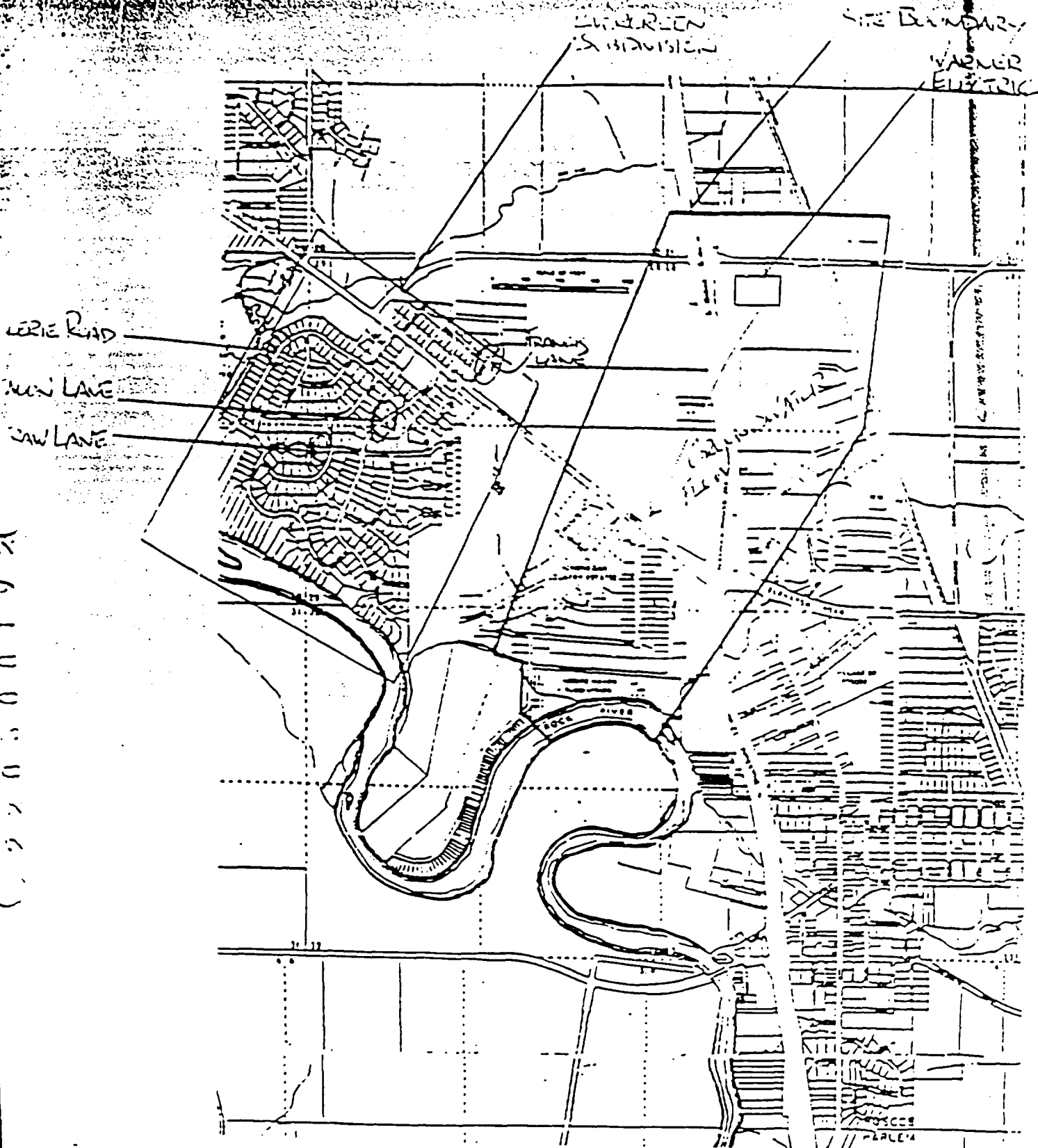


Figure 1. Area of investigation.

N ↑

1000'

scale
(approximate)

Rollingstone Ln

Rollingstone

Winchester Lane

Balsa Lane

Hayloft Lane

Dragon Lane

Straw Lane

Honeysuckle Road

Straw Lane

Valerie Road

Treasure Road

Adelle Street

Mathew Ave

Sampled 12-11-90

Blue Spruce Area

Site	Cole	Address	Owner's Name	mg				mg				mg
12-11		11974 Blue Spruce	Begstrom	38				25				
12-11		11975 Blue Spruce	Wierisbe	75	5	5	6	52	Tr			
12-11		11990 Blue Spruce	Mitchell	38	2	1	3	25	Tr			Tr
12-11		12004 Blue Spruce	Fox	40	2	2	3	27	3			
12-11		12017 Blue Spruce	McTish	69	5	3	7	40	Tr			
12-11		12031 Blue Spruce	Miller	63	2	3	5	34	Tr			
12-11		12044 Blue Spruce	Nelson	52	3	2	4	31	Tr			
12-11		12050 Blue Spruce	Pogoni	50	2	1	4	25	Tr			
12-11	Spill Lab	12062 Blue Spruce	Confield	90	1		4	19				
12-11		12075 Blue Spruce	Whitley	54	2	2	5	27				
12-11		12080 Blue Spruce	Mandel	52	3	2	4	28	Tr			

4 Plant - Quantitation not available

Trichloroethylene												
Dichloroethene	1,1											
Dichloroethane	1,1											
Cis 1,2 Dichloroethene												
Trichloroethane	1,1,1											
Trichloroethane	1,1,2											

Blue Spruce Area

Owner's Name	Age	Dichloroethane	Dichloroethane	Cis 1,2 Dichloroethane	1,1,2 Trichloroethane	1,1,2 Trichloroethane	Trichloroethylene	Other U.O.C.	Carbon Tetrachloride	Total P.P.B
Bergstrom	38				25					
Wiersbe	75	5	5	6	52	Tr				142
Mitchell	38	2	1	3	25	Tr	Tr			69
Fox	40	2	2	3	27	3				77
McIntosh	69	5	3	7	40	Tr				124
Miller	63	2	3	5	34	Tr				107
Nelson	52	3	2	4	31	Tr				92
Pageni	50	2	1	4	25	Tr				82
Canfield	20	1		4	19				3	47
Whitley	54	2	2	5	27					90
Manel	52	3	2	4	28	Tr				89

Available 10/10/80

Sampled 12-11-90

Blue Spruce Area

Job #	Case	Address	Owner's Name	mg				mg	
12-11		12091 Blue Spruce	B-11	43	x	x	5	15	
12-11		12118 Blue Spruce	(Jett) Johnson	55	3	2	6	28	Tr
12-11		4483 Horroghs	Konieczski	12	-	Tr	1	4	
12-11		4474 Mathew Ave	O'Dellman	22	3	2	3	34	Tr
12-11		4567 Mathew Ave	Canavese	34	1	1	5	15	Tr
12-11		4574 Rollingsford	McGill	-	-	-	-	-	-
12-11	(Sut) Clough	4262 Snow Ln	Rhodes	9	1	1	-	14	-
12-11		4486 Snow Ln	Russell Auld	3	-	-	-	Tr	-
12-11		4629 Snow Ln	Cox	-	-	-	-	-	-
12-11		4225 Tresemer Circle	Lertz	-	-	-	-	-	-
12-11		4282 Valerie	Barlow	5	-	Tr		10	-
Trichloroethylene									
1,1		Dichloroethane							
1,1		Dichloroethane							
Cis		1,2 Dichloroethane							
1,1,1		Trichloroethane							
1,1,2		Trichloroethane							

* freezer - Quantities not available 12-24-90

Blue Spruce Area

	Owner's Name	mg				mg				mg				mg		
see	Bull	43	x	x	5	15										
ce	(Jeff) Johnson	55	3	2	6	28	Tr									94
	Ronczski	12	-	Tr	1	4				Tr						17
see	Oridogan	22	3	2	3	34	Tr			2						66
see	Camarec	34	1	1	5	15	Tr			1						57
	Mc Gill	-	-	-	-	-	-			-						0
	Rhodes	9	1	1	-	14	-			-						25
	Russel Aard	3	-	-	-	Tr	-			-						3
	Cox	-	-	-	-	-	-			-						0
Circle	Lertz	-	-	-	-	-	-			-						0
	Barlow	5	-	Tr		10	-			-						15
available 12-24-90																
	Trichloroethylene															
	Dichloroethene 1,1															
	Dichloroethane 1,1															
	1,2 Dichloroethene Cis															
	1,1,1 Trichloroethane															
	1,1,2 Trichloroethane															
	Tetrachloroethylene															
	Other V.O.C.															
	Total P.P.B															

ATTACHMENT 3



ECONOMICS LABORATORY, INC.
OSBORN BUILDING. ST. PAUL, MINNESOTA 55102

December 27, 1979

Mr. Charles E. Corley, R.S.
Illinois Environmental Protection Agency
4302 N. Main Street, P.O. Box 915
Rockford, Illinois 61105

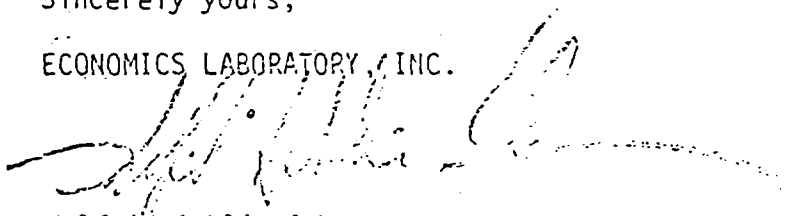
Dear Mr. Corley,

Per your request, attached is report describing area, amount and procedure of sludge and contaminated soil removal from our South Beloit manufacturing facility.

This work was done per the recommendation of the IEPA, Division of Water Pollution Control.

Sincerely yours,

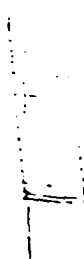
ECONOMICS LABORATORY, INC.



Walfried Ashlie Johnson
Project Architect

WAJ/mc

enclosure



ECONOMICS LABORATORY, INC.
South Beloit, Illinois/Sludge Removal

At the recommendation of the Illinois EPA, Division of Water Pollution Control, sludge and contaminated soil was removed from the abandoned waste lagoon at Economics Laboratory Incorporated's South Beloit manufacturing facility.

The material was removed to Browning-Ferris Industries' Davis Junction disposal site. The licensed waste hauler was Rockford Sand and Gravel, who had on the job two equipment operators and supervisor. The work was accomplished with a front end loader with five cubic yard bucket, small dozer and trucks to remove material. Manifest procedure worked out between Browning-Ferris and IEPA allowed use of one manifest form per truck per day instead of the normal procedure of one manifest form per truckload of material.

Records were kept of each truckload of material removed, size of truck and waste hauler's license number for each truck. These records were reconciled with the hauler's truck count and with the manifests at the end of each day. Completed manifest forms were sent to IEPA as required.

A total of 1,884 cubic yards of material were removed at a cost of \$30,144.

The material was removed from the areas indicated on the attached drawing. The material removed from "area A" consisted of a mucky sludge to a depth of approximately 4-5 feet at it's deepest point, to a depth of 6-12 inches at the end of the long finger. The material was contained by a bentonite liner. This sludge material was removed, including the bentonite liner, and approximately 6-12 inches of soil below the bentonite liner.

The material removed from "area B" consisted of a dry powdery residue of material mixed with the natural gravel of the area. This residue material was at the surface of the soil. In order to remove this residue material, the area shown was scraped to a depth of 6-12 inches and the material removed.

IEPA personnel were requested to inspect site of sludge removal with approximately 2/3 of sludge removed on 12/3/79 and again on 12/4/79 with sludge removal complete (except for piled contaminated soil removed 12/5/79). Samples were taken of both the original mucky sludge material and a representative composite sample of the soil to remain. (Note that representative composite samples of soil to remain were taken both days. The first such sample should not be used since additional material was removed from the areas where the sample was taken.)

The initial inspection was to get IEPA reaction and comments on work already accomplished and to define limits of contaminated soil to be removed. The second inspection was the final inspection after all contaminated material had been removed to Economics Laboratory, Incorporated's satisfaction.

Future use of the area where the sludge was removed has not been determined. However, pending further IEPA recommendations, Economics Laboratory, Inc. would like to consider the option of rerouting waste water system discharge from new settling pond back to area where sludge has been removed. Also, Economics Laboratory, Inc. intends to regrade this part of the overall site to improve drainage patterns and level site for possible future construction.

Walfrid Ashlie Johnson/mc
Project Architect/Economics Laboratory, Inc.
12/27/79

SEP 19 1979

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
SPECIAL WASTE DISPOSAL APPLICATION

PERMIT ISSUED

CARD TYPE DATE 7-23-79 1 P S W C AUTHORIZATION NUMBER 771237 TRANS CODE 14 DATE ENTERED (Agency Use) 1 1 1 1 1 1

WASTE HAULER

1 6 8 7 HAULER REGISTRATION NUMBER 21 24 NAME BROWNING FERRIS INDUSTRIES
ADDRESS 1827 WALDEN OFFICE SQUARE COMMUNITY SCHAUMBURG,
COUNTY COOK STATE IL ZIP 60195 AREA CODE 312 TELEPHONE 397-7760

WASTE GENERATOR

GENERATOR CODE 25 NAME ECONOMICS LABORATORY
ADDRESS OPERATIONS BUILDING COMMUNITY ST PAUL
COUNTY STATE MN ZIP 55102 AREA CODE 612 TELEPHONE 224-4678
GENERATOR CONTACT NAME WALLACE JOHNSON
DUNS NUMBER SIC CODE 2842

2 0 6 7 PROCESS NAME LAGOON CLEAN-UP

WASTE CHARACTERISTICS

GENERIC WASTE NAME CONTAMINATED SOIL

4 0 6 7 IUPAC WASTE NAME

TOTAL ANNUAL WASTE VOLUME 4000 VOLUME UNITS 1 WASTE PHASE 2

TRANSPORT FREQUENCY 1 WASTE CLASS (Agency Use) 54 65
1 = ONE TIME 5 = MONTHLY 1 = CUBIC YARDS 1 = SOLID
2 = DAILY 6 = BI-MONTHLY 2 = GALLONS 2 = SEMI-SOLID
3 = WEEKLY 7 = QUARTERLY 3 = LIQUID
4 = BI-WEEKLY 8 = SEMI-ANNUALLY 4 = GAS

(Code either "1" for Low, "2" for Medium, or "3" for High as appropriate for columns 21 through 26):

5 0 6 7 INHALATION TOXICITY 1 DERMAL TOXICITY 1 INGESTIVE TOXICITY 3 INFECTIOUS 24 REACTIVITY 25 EXPLOSIVE 26

FLASH POINT 200 0 0 F ALPHA RADIATION 31 36 (pCi/L) COMPOSITION 1
1 = ORGANIC
2 = INORGANIC

PERCENT ACIDITY 38 40 PERCENT ALKALINITY 41 43 PERCENT TOTAL SOLIDS 47 48 3 PERCENT ASH CONTENT 57 55

6 0 6 7 KEY COMPONENT NAME CONTAMINATED SOIL PERCENT 48.3 KEY COMPONENT NAME MOISTURE PERCENT 50
1 22 43 44 47 48 49 70 71
3 72 43 44 47 48 49 70 71
5 72 43 44 47 48 49 70 71

CONFIDENTIAL

WASTE CHARACTERISTICS

7 0 6 7	METAL KEY	TOTAL	(PPM)	LEACH	(PPM)	METAL KEY	TOTAL	(PPM)	LEACH	(PPM)
CN	0 1	23	1.4	30	31	Cu	0 2	41	14.4	48
Ag	0 3					Hg	0 4		23.0	
As	0 5		0.2			Ni	0 6		12.0	
Ba	0 7					Pb	0 8		42.0	
Cd	0 9		1.5			Se	1 0			
Cr	1 1		118.0			Zn	1 2		455.0	0.1

8 0
6 7

LABORATORY NAME AQUALAB INC.

CERTIFICATION NUMBER REVIEWED BY: Thomas E. Carney

9 0
6 7

1 21 SITE CODE 14182101 SITE NAME DAVIS JUNCTION / BEL

DISPOSAL METHOD 01 NEUTRALIZATION METHOD

STATUS A START DATE 08,27,79 EXPIRATION DATE 08,27,80

SIGNATURE Robert A. Piest SIGNATURE

(SITE OWNER) (SITE OPERATOR)

2 21 SITE CODE SITE NAME

DISPOSAL METHOD NEUTRALIZATION METHOD

STATUS START DATE EXPIRATION DATE

SIGNATURE SIGNATURE

(SITE OWNER) (SITE OPERATOR)

3 21 SITE CODE SITE NAME

DISPOSAL METHOD NEUTRALIZATION METHOD

STATUS START DATE EXPIRATION DATE

SIGNATURE SIGNATURE

(SITE OWNER) (SITE OPERATOR)

4 21 SITE CODE SITE NAME

DISPOSAL METHOD NEUTRALIZATION METHOD

STATUS START DATE EXPIRATION DATE

SIGNATURE SIGNATURE

(SITE OWNER) (SITE OPERATOR)

5 21 SITE CODE SITE NAME

DISPOSAL METHOD NEUTRALIZATION METHOD

STATUS START DATE EXPIRATION DATE

SIGNATURE SIGNATURE

(SITE OWNER) (SITE OPERATOR)

Jul 16, 1979

ANALYSIS NO. 7486

BROWNING FERRIS INDUSTRIES
P. O. Box 35
Rockford, Illinois 61105

ATTENTION: Mr. C. M. (Skeet) Atkinson

June 12, 1979

June 12, 1979

June 12, 1979

SAMPLE DESCRIPTION: Economics Lab Soil

<u>Parameter</u>	<u>Analysis, ppm</u>	<u>Leach, ppm</u>
• Arsenic	0.23	
• Cadmium	1.50	
• Chromium, total	118	
• Copper	14.4	
• Cyanide, total	1.36	
• Lead	42	
• Mercury	0.23	
Nickel	12	
pH	8.2	
Zinc	155	ppm on dry wt
%Total Solids	• 48.5%	
Flash Point	• 112°F No Flash - No Boil	

Larry McAnarney
Larry McAnarney,
Laboratory Supervisor

ATTACHMENT 4

Illinois Environmental Protection Agency

AUG 08 1980



P.O. Box 910
Rockford, IL 61106

August 6, 1980

ECONOMICS LABORATORY INC. - South Beloit
Plant Wastewater Sludge Removal

Economics Laboratory, Inc.
Osborn Building
St. Paul, Minnesota 55102

ATTENTION: Walfrid A. Johnson, Project Architect

Dear Mr. Johnson:

Recently we received all of the waste sludge and lagoon area solids analysis and reference material on whole soils analyses for comparison purposes. We are enclosing copies (all labeled) of the solids and sludge samples collected from the South Beloit Plant site during the cleanup operation in December 1979.

After reviewing the analytical data, it appears that the wastewater sludge was adequately removed from the lagoon site. Based on a comparison of the analysis of the remaining base soil with the concentration of elements shown on the enclosed chart, the area soil is well within the "usual range." We would conclude from the above that the former lagoon site could be used by the company for future expansion of the parking lot or plant buildings. The area could also be returned to its original condition. However, if the company wishes to use the area for storm water or wastewater seepage, we would recommend that you collect and analyze deep soil core samples in the area.

In regards to the existing cooling water discharge from the plant, we are enclosing an application form for a National Pollutant Discharge Elimination System permit and appropriate instructional information.

If you have any questions or comments concerning this letter, please feel free to contact the undersigned, or C. E. Corley of my staff, at the address above.

Sincerely,
DIVISION OF WATER POLLUTION CONTROL

Harris J. Chien, P.E.
Manager - Region 1
Field Operations Section

HJC/CEC/bjs

cc: -Region 1
-DWPC/FOS/Records Unit
-Bob Wengrow/DLPC

SPECIAL ANALYSIS FORM

Collected 4-20-84Sub-Basin Rocky MtnCollected 3 Dec. 1979Collector C. C. CadyKey Name: Environmental Laboratory

Facility Number:

File Term

Name(s)

Stream Code:

Date of Sample: (Exact Location)

Soil sample from farm (near treatment basin -
study being held to RPT Data on land)

Local Observations, Remarks:

Water from gravel sand & gravelly clay

LOCAL WATER ANALYSIS

Field Dissolved Oxygen	Field pH	Field Temp.

<u>17</u> <u>Arsenic</u>	<u>Coliform/100ml</u>	<u>BOD</u>
<u>100</u> <u>Barium</u>	<u>Fecal Coliform</u>	<u>COD</u>
	<u>100 ml</u>	
	<u>Fecal Strept</u>	<u>TS/EC</u>
	<u>100 ml</u>	
<u>6</u> <u>Cadmium</u>	<u>Algae (Total) /ml</u>	<u>Susp. Solids</u>
<u>72</u> <u>Copper</u>	<u>Arsenic (M)</u>	<u>Vol. Susp. Solids</u>
	<u>Organic Nitrogen (M)</u>	
<u>28</u> <u>Chromium (Total)</u>	<u>Nitrate + Nitrite (M)</u>	<u>Turbidity (JTU)</u>
<u>1000</u> <u>Iron (Total)</u>	<u>60,000</u> <u>Phosphorus (P)</u>	<u>Hardness</u>
	<u>Chloride</u>	<u>Alkalinity</u>
<u>70</u> <u>Lead</u>	<u>Fluoride</u>	<u>RECEIVED</u>
<u>170</u> <u>Manganese</u>	<u>Sulfate</u>	<u>REGION 1 OFFICE</u>
<u>2.8</u> <u>Mercury (ppb)</u>	<u>Cyanide</u>	<u>APR 23 1984</u>
<u>50</u> <u>Nickel</u>	<u>MIBAS</u>	<u>Free Acidity</u>
	<u>Phenol (ppb)</u>	<u>Oil</u>
	<u>Selenium</u>	<u>Other (Specify)</u>

2400 Zinc

ults in mg/l unless
 ewise noted. ✗

0% Recycled Paper

1 mg/g dry wt

3 LAB-3

Transported by: 10/1/84

Received by: 10/1/84

Transported by: 10/1/84

Received by: 10/1/84

FOR LAB USE ONLY

Lab Number: 10/1/84 Rec'd by: 10/1/84Date sample received: 10/1/84Date analysis completed: 10/1/84Date results forwarded: 10/1/84Total Tests requested: 10/1/84Lab Section: 10/1/84 Supervisor: 10/1/84

SPECIAL ANALYSIS FORM

Collected 4:00 PMSub-Basin Pack 2ndCollected 3 Dec 1979Collector C. BaileyCity Name: Economichs Laboratory

Facility Number:

File Town: South Bend

Sam Name(s)

Stream Code:

Loc of Sample: (Exact Location)

Soil Sample from former waste treatment
pond - base soil remaining at site

Visual Observations, Remarks:

Sandy light brown & brown + black soils
total water 1000/100

	Field Dissolved Oxygen	Field pH	Field Temp.
--	------------------------	----------	-------------

<u>5.8</u> (Arsenic)	California/100ml	BOD
<u>790</u> (Barium)	Fecal Coliform	COD
	100 ml	
Boron	Fecal Strep	TS/EC
	100 ml	
<u>2</u> (Cadmium)	Algae (Total) /ml	Susp. Solids
<u>23</u> (Copper)	Amonia (N)	Vol. Susp. Solids
<u>Chlorine (ppb)</u>	Organic Nitrogen (N)	<u>Chlorine (ppb)</u>
<u>28</u> (Chromium)	Nitrate + Nitrite (N)	Turbidity (NTU)
<u>17000</u> (Iron (Total))	<u>5440</u> (Phosphorus (P))	Hardness
Iron (Dissolved)	Chloride	Alkalinity
<u>50</u> (Lead)	Fluoride	Total Acidity
<u>300</u> (Manganese)	Sulfate	Free Acidity
<u>0.24</u> (Mercury (ppb))	Cyanide	Oil
<u>20</u> (Nickel)	MBAS	Other (Specify)
Selenium	Phenol (ppb)	
Silver		
<u>130</u> (Zinc)		

Results in mg/l unless
 otherwise noted. 5%

100% Recycled Paper

mg/g dry wt
 '73 LAB

Transported by: DA Bailey
 Received by: DA Bailey
 Transported by: DA Bailey
 Received by: DA Bailey

RECEIVED
 REGION 1 D.W.P.C.

MAH 21 1980

ENVIRONMENTAL PROTECTION AGENCY
 STATE OF ILLINOIS

FOR LAB USE ONLY

Lab Number: 25 Rec'd by: DA Bailey
 Date sample rec'd: 11/1/79 Time: 1P
 Date analysis completed: 11/1/79
 Date results forwarded: 11/1/79
 Total Tests requested: 1 Tests run: 1
 Lab Section: 1 Supervisor: DA Bailey

02227 DEC-6

SPECIAL ANALYSIS FORM

Sample Collected 3:00 P.M.Sub-Basin RockfordDate Collected 4 Dec. 1979Collector C. CarlsonFacility Name Economics Laboratory Inc.Facility Number 1File Town South BeloitStream Name(s) 1Stream Code:

Description of Sample: (Exact Location)

Cooling water discharge to percolation pond
South of plant bldg.

Physical Observations, Remarks:

Clear, very pale green, no oil, susp. solids etc.

Field Dissolved Oxygen		Field pH		Field Temp.	
<u>2.0</u> Arsenic	<u>0.01</u> Coliform/100ml	<u>1.2</u> BOD			
<u>0.0</u> Barium	<u>0.01</u> Fecal Coliform	<u>1.2</u> COD			
<u>0.0</u> Boron	<u>0.01</u> Fecal Strept	<u>1.2</u> 1000			
<u>0.0</u> Cadmium	<u>0.01</u> Algae (Total) /ml	<u>1.2</u> 1000			
<u>1.15</u> Copper	<u>0.01</u> Ammonia (NH)	<u>1.2</u> Vol. Susp. Solids			
<u>0.0</u> Chromium (tri)	<u>0.01</u> Organic Nitrogen (N)	<u>1.2</u> 1000			
<u>0.0</u> Chromium (hex)	<u>4.7</u> Nitrate + Nitrite (N)	<u>1.2</u> Turbidity (JTU)			
<u>0.3</u> Iron (Total)	<u>0.35</u> Phosphorus (P)	<u>1.2</u> Hardness			
<u>0.0</u> Iron (Dissolved)	<u>0.0</u> Chloride	<u>1.2</u> Alkalinity			
<u>0.03</u> Lead	<u>0.0</u> Fluoride	<u>1.2</u> Total Acidity			
<u>0.01</u> Manganese	<u>0.0</u> Sulfate	<u>1.2</u> Free Acidity			
<u>0.0</u> Mercury (ppb)	<u>0.0</u> Cyanide	<u>1.2</u> Oil			
<u>0.0</u> Nickel	<u>0.0</u> NHAS	<u>0.29</u> Total Chromium			
<u>0.0</u> Selenium	<u>0.0</u> Phenol (ppb)	<u>0.02227</u> (other (specify))			
<u>0.2</u> Silver					
<u>0.2</u> Zinc					

Results in mg/l unless otherwise noted.

100% Recycled Paper

Transported by: [Signature]
 Received by: [Signature]
 Transported by:
 Received by:

FOR LAB USE ONLY
 Lab Number: 0002227 Rec'd by: R. Mali
 Date sample rec'd: 12-6-79 Time: 12:00 P.
 Date analysis completed:
 Date results forwarded: 12-24-79
 Total Tests requested: 15 Tests run:
 Lab Section: Chloroph Super: [Signature]

SPECIAL ANALYSIS FORM

Collected 3:05PSub-Basin RockfordCollected 4 Dec. 79Collector C. Carley

City Name:

Facility Number:

File Town

Name(s) Economics LaboratoryStream Code: South / Beloit

Location of Sample: (Exact Location)

Soils sample from former wastewater lagoon site - base soil remaining after complete cleanup

Local Observations, Remarks:

Sandy, light brown-gray soil, some black soil

Field Dissolved Oxygen

Field pH

Field Temp.

7 Arsenic

Coliform/100ml

BOD

Barium

Fecal Coliform

COD

100 ml

Boron

Fecal Strep

TS/EC

100 ml

0.5 Cadmium

Algae (Total) /ml

Susp. Solids

6 Copper

Ammonia (N)

Vol. Susp. Solids

Chromium (tri)

Organic Nitrogen (N)

— pH (units)13 Chromium (total)

Nitrate + Nitrite (N)

Turbidity (NTU)

8300 Iron (total)3820 Phosphorus (P)

Hardness

Iron (Dissolved)

Chloride

Alkalinity

6 Lead

Fluoride

Analytical results for sample 326491 reconstructed from laboratory records0.20 Manganese

Sulfate

Free Acidity

0.18 Mercury (ppm)

Cyanide

Oil

6 Nickel

MBAS

Other (Specify)

Selenium

Phenol (ppb)

Silver

4.5 ZincResults in mg/L unless otherwise noted.

100% Recycled Paper

Transported by: DDJReceived by: (initials)Transported by: (initials)Received by: (initials)

FOR LAB USE ONLY

Lab Number: 326491 Rec'd by: (initials)Date sample rec'd: 12/12/79 Time: (initials)Date analysis completed: (initials)Date results forwarded: (initials)Total tests requested: (initials) Tests run: (initials)Lab Champaign Supervisor (initials)

LAB-3 3/73 (Duplicate lab form. Subm: Htd 12 May 1985)

Table 6. Element variations in soils, the lithosphere and rock (in ppm of dry material)¹.

Element	Soils		Rock Composition				
	Average	Usual Range	Lithosphere Average	Igneous	Limestone	Sandstone	Shale
P		400-5,000		1,300	195	356	817
S	850	100-1,500		900	8,000	2,200	1,100
Fe		14,000-40,000		40,600	15,000	31,000	45,000
Al				90,000	4,700	28,000	90,400
Mn	850	200-3,000	1,000	1,000	1,300	335	
Zn	50	10-300	80	80	4-20	5-20	50-300
Cu	20.0	2-100	70.0	70	5-20	10-40	30-150
B	10.0	2-100	10.0	15	18	155	150
Mo	2.0	0.2-5.0	2.3	1.7	0.1-0.5	0.1-1.0	1.0
Co	8.0	1-40	40	18	0.2-2	1-10	10-50
Ba	500	100-3,000		640	20-200	100-500	500-600
Cr	200	5-1,000	200	117	5	10-100	100-400
F	200			660	61	290	590
Se	0.01	0.1-2.0	0.09	0.09	0.1-1.0	1.0	0.5-1.0
V	100	20-500	150	90	2-20	10-60	50-300
As	5.0	1-50	5.0	2.0-5.5			5.0
Be	6.0		6.0	4.2	<1	<1	
Si	<1.0		0.2	0.22		0.33	
Cd	0.5	0.01-0.70	0.18	0.13			0.3
Cs	5.0	0.3-26	3.2	7.7			13.2
Hg	0.03	0.03-0.3	0.5	0.06	0.03	0.03-0.1	0.4
Li	30	5-200	65	50	2-20	7-29	50
Ni	40	5-500	100	100	3-10	2-10	20-100
Pb	10	2-200	16	16	5-10	10-40	20
Sb				0.30		1.0	3.0

¹ Swaine (1955); Rankama and Sahama (1968); Wedepohl (1970); and Hawkes and Webb (1962).

REGION 1 DRAFT

JUL 28 1988

ENVIRONMENTAL PROTECTION AGENCY
STATE OF ILLINOIS

ATTACHMENT 5



HYDRITE CHEMICAL CO.

2655 N. MAYFAIR ROAD MILWAUKEE, WISCONSIN 53226 414/257-2300

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 14, 1984

Economic Labs
P.O. Box 1018
South Beloit, IL 53511

Attn: Jan Nastasi

In the interest of worker safety, and in compliance with the Wisconsin's "Employee's Right to Know Law" (effective December 1, 1982), we have enclosed copies of the following Material Safety Data Sheets:

111 Trichloroethane (PP81)-CS-2008
(VU82-2)-CS-2008

These Material Safety Data Sheets contain necessary information about product hazards and proper handling. This data relates only to the specific material designated and does not relate to its use in combination with any other material or process. In those cases where the Material Safety Data Sheet is stamped "Distributed by Hydrite Chemical Co." the information is that provided solely by our primary and secondary suppliers. Hydrite Chemical Co. believes that the factual data contained in the enclosed sheets are correct. The opinions expressed in them are those of qualified experts regarding the results of tests conducted; however, since conditions of use are outside our control, they are not to be taken as a warranty or representation for which Hydrite Chemical Co. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

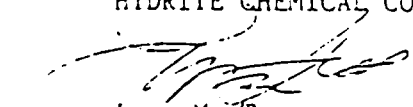
The "Employee's Right to Know Law" requires all Wisconsin companies to post a notice as outlined in Wisconsin Administration Code Section 101.581 providing specified information to employees, employee representatives and employers. Whether your Company is affected by this law or not, Hydrite Chemical Co. strongly urges you to provide the warnings and information in the enclosed Material Safety Data Sheets to your employees, customers, handlers, people exposed to, or users of any of these products.

We would appreciate it if you would fill out and return the enclosed card to verify that you have received the enclosed Material Safety Data Sheet(s).

If you have any questions, or if I can be of service in the future, please feel free to contact me.

Sincerely,

HYDRITE CHEMICAL CO.



Lynn M. Tess

Material Safety Data Sheet Coordinator

LMT/clm
Enclosures

— "OVER FIFTY YEARS OF SERVICE TO INDUSTRY" —

Material Safety Data Sheet

PPG INDUSTRIES, Inc.
Chemicals Group
One Gateway Center
Pittsburgh, PA 15222



Approved by U.S. Dept. of Labor as "Essentially similar" to Form OSHA-20

Date: January, 1931	Edition: Fourth (PP81)-CS-2008
Chemical Name and Synonyms: 1,1,1-trichloroethane; methylchloroform CAS No.: 71-55-0	Trade Name and Synonyms: Tri-Ethane®
Chemical Family: Halogenated Hydrocarbons	Formula: CH_3CCl_3
DOT Shipping Name: 1,1,1 trichloroethane	DOT Hazard Class: ORM-A, UN2831

SECTION 1 • PHYSICAL DATA

Boiling Point @ 760 mm Hg: 165.4°F	Vapor Density (Air=1): 4.54	Specific Gravity ($\text{H}_2\text{O}=1$): 1.31 @ 25°/25°C	pH of Solutions: 6.0 to 7.5
Freezing/Melting Point: -49°F -45°C	Solubility (Weight % in Water): Negligible	Bulk Density: 10.84 lbs./gal. @ 25°C	Volume % Volatile: 100
Vapor Pressure: @ 25°C = 104.4mmHg	Evaporation Rate (ethyl ether=1): 0.35	Heat of Solution: Not Applicable	Appearance and Odor: Clear, colorless liquid - ether-like odor.

SECTION 2 • HAZARDOUS INGREDIENTS

	%	Hazard Data
1,1,1-trichloroethane (Stabilized)	100	See Below

SECTION 3 • FIRE AND EXPLOSION HAZARD DATA

Flash Point °F (Method Used) None when tested in accordance with DOT requirements.	Flammable Limits in Air (% by Volume) LEL: 7% See Below UEL: 15%	Extinguishing Media: Water, dry chemical or carbon dioxide.
--	--	--

Special Fire Fighting Procedures: Fire fighters should wear a NIOSH/MSHA-approved pressure-demand self-contained breathing apparatus for possible exposure to hydrogen chloride and possibly traces of phosgene.

Unusual Fire and Explosion Hazards: Vapors concentrated in a confined or poorly ventilated area can be ignited upon contact with a spark, flame or high intensity source of heat. This can occur at concentrations ranging between 7-15% by volume. Decomposition or burning can produce

SECTION 4 • HEALTH HAZARD DATA

hydrogen chloride or possibly traces of phosgene.
Permissible Exposure Limits (TLV): 350 ppm - 8-hour time-weighted average (TWA) - OSHA 29CFR 1910.100 (May 28, 1975). PPG internal permissible exposure limit is 350 ppm 8-hour TWA with a short term exposure limit (STEL) of 450 ppm for any 15-minute excursion period.

Toxicity Data (1)	Classification (Poison, Irritant, Etc.)
LC ₅₀ Inhalation (rat) 8,000 ppm/7 hours	Inhalation: Toxic
LD ₅₀ Dermal (rabbit) > 15g/kg ⁽²⁾	Skin/Eye: Liquid mildly irritating to skin; irritant.
LD ₅₀ Ingestion (rat) 10-12gm/kg (See Section 5)	Ingestion: Not Significantly Toxic
Fish, LC ₅₀ (Lethal Concentration) Not Determined	Aquatic:

Human Exposure Information/Data

See Section 5

24-HOUR EMERGENCY ASSISTANCE: (304) 843-1300

SECTION 5 • EFFECTS OF OVEREXPOSURE

This section covers effects of overexposure: for inhalation, eye/skin contact, ingestion and other types of overexposure information in the order of the most hazardous and the most likely route of overexposure.

Acute: Primarily a central nervous system depressant. Inhalation can cause irritation of the respiratory system, dizziness, nausea, lightheadedness, headache, loss of coordination and equilibrium, unconsciousness and even death in confined or poorly ventilated areas. Depression of the circulatory system has been reported as a result of overexposure to Tri-Ethane®. The heart may be sensitized by Tri-Ethane®, and ventricular arrhythmia may be induced by epinephrine administration.

Liquid splashed in the eyes can result in discomfort, pain and irritation. Prolonged or repeated contact with liquid on the skin can cause irritation and dermatitis. The problem may be accentuated by liquid becoming trapped against the skin by contaminated clothing and shoes. Skin absorption can occur.

Chronic:

Prolonged exposure above the OSHA permissible exposure limits may result in liver and kidney damage. Tri-Ethane® has been extensively studied for cancer both in the U.S. and Europe by government, industry and academia in multiple species and biological test specimens. Recent reviews of these data by the Science Advisory Board to EPA's carcinogen assessment group concluded that there was no evidence to support the carcinogenicity of Tri-Ethane®. There is no documented evidence that Tri-Ethane® causes an increased cancer incidence in humans.

The data in this Material Safety Data Sheet relates only to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty or representation for which Hydrite Chemical Co. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

Eye or Skin Contact: Flush eyes and skin with plenty of water (soap and water for skin) for at least 15 minutes, while removing contaminated clothing and shoes. If irritation occurs, consult a physician.

Ingestion: If conscious, drink a quart of water. DO NOT induce vomiting. Take immediately to a hospital or physician. If unconscious, or in convulsions, take immediately to a hospital or physician. DO NOT give anything by mouth to an unconscious person.

Notes to Physician (Including Antidotes): NEVER administer adrenalin following Tri-EthaneS overexposure. Increased sensitivity of the heart to adrenalin may be caused by overexposure to Tri-EthaneS.

SECTION 6 . REACTIVITY DATA

Stability: Stable	Conditions to Avoid: Avoid open flames, hot glowing surfaces or electric arcs.
Hazardous Polymerization: Will not occur	Conditions to Avoid: None

Incompatibility (Materials to Avoid): Avoid contamination with caustic soda, caustic potash or oxidizing materials. Shock sensitive explosives may be formed.

Hazardous Decomposition Products: Hydrogen chloride and possibly traces of phosgene.

SECTION 7 . SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: Immediately evacuate the area and provide maximum ventilation. Unprotected personnel should move upwind of spill. Only personnel equipped with proper respiratory and skin/eye protection should be permitted in area. Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover or absorb spilled material on sawdust or vermiculite and sweep into closed containers for disposal. After all visible traces have been removed, thoroughly wet vacuum the area. DO NOT flush to sewer. If area of spill is porous, remove as much contaminated earth and gravel, etc., as necessary and place in closed containers for disposal. (See Below)

Waste Disposal Method: Contaminated sawdust, vermiculite or porous surface must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated or must be treated in a permitted hazardous waste management facility. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. It is your duty to dispose of the chemical materials and their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act and all relevant state or local laws/regulations regarding disposal.

SECTION 8 • SPECIAL PROTECTION INFORMATION

Respiratory Protection: For emergencies or working in confined areas, wear self-contained breathing apparatus or supplied air respiratory protection. In other circumstances involving potential overexposure, use NIOSH/MSHA-approved organic vapor respirator. (Observe limitations directed by manufacturer). Respiratory protection program must be in accordance with 29CFR 1910.134.

Ventilation (Type): Dilution (General) or Local Exhaust - Sufficient to maintain workplace concentration below permissible exposure limits.

Eye Protection: Splashproof goggles

Gloves: Polyethylene, neoprene or polyvinyl alcohol

Other Protective Equipment: Safety shower and eye-wash fountain in immediate area. Personnel protective clothing and use of equipment must be in accordance with 29CFR 1910.133 and 29CFR 1910.132.

SECTION 9 • SPECIAL PRECAUTIONS

Precautions to be Taken During Handling and Storing:

- Do not use in poorly ventilated or confined areas.
- Tri-Ethane® vapors are heavier than air and will collect in low areas.
- Keep container closed when not in use.
- Do not store in open, unlabeled or mislabeled containers.
- Liquid oxygen or other strong oxidants may form explosive mixtures with Tri-Ethane®.
- This material or its vapors when in contact with flames, hot glowing surfaces or electrical arcs can decompose to form hydrogen chloride gas and traces of phosgene.
- AVOID CONTAMINATION OF WATER SUPPLIES: Handling, storage and use procedures must be carefully monitored to avoid spills or leaks. Any spill or leak has the potential to cause underground water contamination which may, if sufficiently severe, render a drinking water source unfit for human consumption. Contamination that does occur cannot be easily corrected.

Other Precautions:

- AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. High vapor concentrations can cause dizziness, unconsciousness or death. Long term overexposure may cause liver/kidney injury.
- USE ONLY WITH ADEQUATE VENTILATION. Ventilation must be sufficient to limit employee exposure to Tri-Ethane® below OSHA permissible limits (8-hour TWA 350ppm). Observance of lower limits (outlined in Section 4) is advisable.
- AVOID CONTACT WITH EYES. Will cause irritation and pain.
- AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. May cause irritation or dermatitis.
- DO NOT TAKE INTERNALLY. Swallowing may cause injury or death.
- DO NOT EAT, DRINK OR SMOKE IN WORK AREAS.

References:

1. NIOSH Registry of Toxic Effects of Chemical Substances, 1978
2. Industrial Hygiene and Toxicology, Volume II, Second Edition, F. A. Patty, 1963
3. Dangerous Properties of Industrial Materials, Fifth Edition, N. I. Sax, 1979
4. Industrial Toxicology, Hamilton and Hardy, 1974
5. Toxicity and Metabolisms of Industrial Solvents, Browning, 1965
6. Toxicology, the Basic Science of Poisons, Casarett and Doull, 1980
7. Federal Register, 45FR Hazardous Waste Management Systems Part III, Identification and Listing of Hazardous Wastes, Page 33084, May 19, 1980
8. EPA Science Advisory Board, Subcommittee on Airborne Carcinogens, September, 1980

Comments:

The data in this Material Safety Data Sheet relates only to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty or representation for which Hydrite Chemical Co. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

Vulcan CHEMICALS

Division of Vulcan Materials Company

(VU82-2) -CS-2008

MATERIAL SAFETY DATA SHEET

(ESSENTIALLY SIMILAR TO FORM OSHA-20)

SEE IMPORTANT NOTICE ON BOTTOM OF OTHER SIDE

24 Hour Emergency Phone (316) 524-5751

I - PRODUCT IDENTIFICATION		
MANUFACTURER'S NAME AND ADDRESS Vulcan Materials Company, Chemicals Division, P. O. Box 7689, Birmingham, AL 35253-0689		
CHEMICAL NAME 1,1,1-Trichloroethane, Methyl Chloroform	CHEMICAL FORMULA <chem>CH3CCl3</chem>	DISTRIBUTION BY:
TRADE NAME AND SYNONYMS Solvent 111B	CHEMICAL FAMILY Chlorinated Hydrocarbon	3853 N. Mayfair Rd.
CAS REGISTRY NO. 71-55-6	DOT IDENTIFICATION NO. UN 2831	

II - HAZARDOUS INGREDIENTS		
MATERIAL OR COMPONENT 1,1,1 Trichloroethane (stabilized)	% (wt) 100	PEL (Units) 350ppm

III - PHYSICAL DATA		
BOILING POINT (°F.) 162-190°F	SPECIFIC GRAVITY (H ₂ O=1) 1.3	
VAPOR PRESSURE (mm Hg.) @20°C 100	PERCENT, VOLATILE BY VOLUME (%) 100	
VAPOR DENSITY (AIR=1) 4.6	EVAPORATION RATE (ether=1) 0.4	
SOLUBILITY IN WATER 0.07g/100g @ 25°C	APPEARANCE AND ODOR Colorless clear liquid; mildly sweet odor.	

IV - FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used) None (TCC)	FLAMMABLE LIMITS in air @ 25°C	Lower 7.5% (vol)	Upper 15.0% (vol)
EXTINGUISHING MEDIA Foam, Dry Chemical, Carbon dioxide			
SPECIAL FIRE FIGHTING PROCEDURES Self-contained breathing apparatus should be used in areas where 1,1,1-trichloroethane is stored.			
UNUSUAL FIRE AND EXPLOSION HAZARDS Concentrated vapors can be ignited by high intensity heat source.			
Decomposition produces hydrogen chloride.			

V - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Contact with open flame, hot surfaces or electric arcs
INCOMPATIBILITY (Materials to avoid) Strong alkalis, oxidizing materials			
HAZARDOUS DECOMPOSITION PRODUCTS Hydrogen chloride, phosgene (small amounts)			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	None

VI - HEALTH HAZARD DATA

OSHA PERMISSIBLE EXPOSURE LIMIT

350 ppm 8 hour TWA. (29 CFR part 1910.1000)

ACGIH: 350 ppm 8 hour TLV; 450 ppm 15 min STEL.

EFFECTS OF OVEREXPOSURE

INHALATION:

Major route of exposure - low systemic toxicity; acute exposures in the 1000 ppm range cause narcosis. Overexposure can cause dizziness, drunkenness and drowsiness, unconsciousness and even death at extreme doses.

SKIN CONTACT/ABSORPTION:

Prolonged or repeated skin contact can cause dermatitis through defatting of skin. Absorption through skin is not a significant route of exposure - mildly irritating on contact.

INGESTION:

Unlikely route of exposure, ingestion of small quantities is not likely to be toxic.

EYES:

Mild irritation, but no corneal injury likely. May cause conjunctivitis.

EMERGENCY AND FIRST AID PROCEDURES

EYES AND SKIN

Remove contaminated clothing and flush exposed areas with water for 5 to 15 minutes.

INHALATION

Remove to fresh air. If breathing has stopped, administer respiration or oxygen if available.

INGESTION

Do not induce vomiting. Call physician and obtain medical attention.

VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate the area, ventilate, avoid breathing vapors, contain spill. Clean up area (wear protective clothing) by mopping or with absorbent material, transfer to closed container.

WASTE DISPOSAL METHOD Recovered liquids may be sent to a licensed reclaimer or incinerated. Contaminated absorbent material must be disposed of in a permitted waste management facility. Consult federal, state or local disposal authorities for approved procedures.

VIII - SPECIAL PROTECTION INFORMATION

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY None required when used with adequate ventilation.

EYE Chemical safety goggles. Contact lenses should not be worn.

SKIN Neoprene, viton, polyvinyl alcohol coated gloves or equivalent.

OTHER Protective headgear & apron when splashing is a problem.

VENTILATION REQUIREMENTS

Sufficient to maintain below PEL.

IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Avoid contact with skin & avoid breathing vapors. Pipe vents outdoors. Store in cool, dry, ventilated area. Vapors are heavier than air and will collect in low areas.

OTHER PRECAUTIONS

Prevent moist air from entering storage. No smoking in presence of vapors.

Contact with aluminum parts in a pressurizable fluid system may cause violent reactions.

Consult equipment supplier for further information.

DATE September 1982

NOTICE: Vulcan Chemicals believes that the information contained on this Material Safety Data Sheet is accurate. The suggested procedures are based on experience of the date of publication. They are not necessarily all-inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor follow violation of applicable laws, regulations, rules or insurance requirements.

NO WARRANTY, EXPRESS OR IMPLIED, OR MERCHANTABILITY, FITNESS OR OTHERWISE IS MADE.

The data in this Material Safety Data Sheet relates only to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty or representation for which Hydrie Chemical Co. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

Rec 1/83

VIKING CHEMICAL COMPANY
1827-18th Ave.
P.O. BOX 1595
ROCKFORD, IL 61110
(815) 397-0500

MATERIAL SAFETY DATA SHEET

June 13, 1986

A. IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME
SAFE-SOLV

CHEMICAL NAME
PETROLEUM DISTILLATE WITH ADDITIVES

PRODUCT APPEARANCE AND ODOR
water white liquid - sharp odor.

EMERGENCY TELEPHONE NUMBER
CHEMTREC - 800-424-9300
VIKING CHEMICAL CO. - 815-397-0500

B. COMPONENTS AND HAZARD INFORMATION

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
METHYLENE CHLORIDE	500ppm			
PERCHLOROETHYLENE	100ppm	50ppm	100ppm (TWA)	
MINERAL SPIRITS	500ppm	100ppm		

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health Flammability Reactivity BASIS
1 2 0

EXPOSURE LIMIT FOR TOTAL PRODUCT

100 ppm (390 mg/m³) for an
8-hour workday

BASIS

Recommended by the American Conference of Governmental
Industrial Hygienists (ACGIH)

C. EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT

If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN CONTACT

In case of skin contact, remove any contaminated clothing and wash skin thoroughly with soap and water.

INHALATION

If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

INGESTION

If Ingested, DO NOT induce vomiting; call a physician immediately.

D. FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (MINIMUM) none

ASTM D 56, Tag Closed Cup

AUTOIGNITION TEMPERATURE

Approximately 255° C (490° F)

ASTM D 2155

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION

Health Flammability Reactivity BASIS

1 2 0 Recommended by the National Fire Protection Association

HANDLING PRECAUTIONS

Keep product away from heat, sparks, pilot lights, static electricity, and open flame.

FLAMMABLE OR EXPLOSIVE LIMITS (APPROXIMATE PERCENT BY VOLUME IN AIR)

Estimated values: Lower Flammable Limit 0.9% Upper Flammable Limit 23.0%

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES

Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's "Fire Protection Guide on Hazardous Materials", Eighth Edition (1984):

Use dry chemical, foam or carbon dioxide. Water may be ineffective, but water should be used to keep fire-exposed containers cool. If a leak or spill has ignited, use water spray to disperse the vapors and to protect men attempting to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

NOTE: The inclusion of the phrase "water may be ineffective" is to indicate that although water can be used to cool and protect exposed material, water may not extinguish the fire unless used under favorable conditions by experienced fire fighters trained in fighting all types of flammable liquid fires.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, in the case of incomplete combustion.

"EMPTY" CONTAINER WARNING

"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

E. HEALTH AND HAZARD INFORMATION

VARIABILITY AMONG INDIVIDUALS

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

EFFECTS OF OVEREXPOSURE (Signs and symptoms of exposure)

High vapor concentrations (greater than approximately 1000 ppm) are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic, and may have other central nervous system effects.

NATURE OF HAZARD AND TOXICITY INFORMATION

Prolonged or repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria.

Product contacting the eyes may cause eye irritation.

Reports of animal studies using both sexes of several species have shown that kidney damage can occur in male rats after prolonged and repeated inhalation exposures to light hydrocarbon vapors of the general type present in this product. While the damage is of a low order of severity in animals, the implications of these results for humans have not yet been determined.

Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion may cause mild to severe pulmonary injury and possibly death.

This product is judged to have an acute oral LD50 (rat) greater than 5 g/kg of body weight, and an acute dermal LD50 (rabbit) greater than 3.16 g/kg of body weight.

F. PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

BOILING RANGE $> 104^{\circ}$
Approximately

VAPOR PRESSURE
 > 12 mm Hg @ 25°C
ASIM D 2879

SPECIFIC GRAVITY (15.6 C/15.6 C)
1.0389

VAPOR DENSITY (AIR = 1)
 > 3.0

PERCENT VOLATILE BY VOLUME
100 @ 1 atm. and 25°C (77°F)

pH
Essentially neutral

EVAPORATION RATE @ 1 ATM. AND 25 C (77 F)
(n-BUTYL ACETATE = 1)

0.6
SOLUBILITY IN WATER @ 1 ATM. AND 25 C (77 F)
Insoluble; less than 0.1%

G. REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

Metallio aluminum and zinc powders should be avoided.

H. SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter

sewers, watercourses, or extensive land areas. Assure conformity with applicable governmental regulations. Continue to observe precautions for volatile, combustible vapors from absorbed material.

I. PROTECTION AND PRECAUTIONS

VENTILATION

Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. Use explosion-proof equipment. No smoking or open lights.

RESPIRATORY PROTECTION

Use supplied-air respiratory protection in confined or enclosed spaces, if needed.

PROTECTIVE GLOVES

Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION

Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE EQUIPMENT

Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

WORK PRACTICES / ENGINEERING CONTROLS

Keep containers and storage containers closed when not in use. Do not store near heat, sparks, flame or strong oxidants. To prevent fire or explosion risk from static accumulation and discharge, effectively ground product transfer system in accordance with the National Fire Protection Association standard for petroleum products.

PERSONAL HYGIENE

Minimize breathing vapor or mist. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean and dry before reuse. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

J. TRANSPORTATION INFORMATION

TRANSPORTATION INCIDENT INFORMATION

For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents, DOT # 5800.2.

K. ADDITIONAL INFORMATION

NOTE TO PHYSICIAN: Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by an attending physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase "myocardial irritability." Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.



VIKING CHEMICAL COMPANY
1827 Eighteenth Avenue
Post Office Box 1595
Rockford, Illinois 61110
815-397-0500

March 18, 1988

ECOLAB INC.
ATTN: ~~NANCY VANCE~~ WTS
P.O. BOX 1018
BELOIT, WI 53511

Dear Viking Customer,

Enclosed are the Material Safety Data Sheet(s) (MSDS) which provide information on products which you have previously purchased from Viking. These MSDS have either been revised since you last received them, or are for products which you have purchased from us in the recent past. Please consider them as the current copy to replace any previous version you may have received.

The distribution of these sheets is part of a continuing program at Viking of providing information and updating our valued customers. This information should be made available to any health and safety personnel in your firm as well as all employees handling these products. Any significant changes in health, safety, or environmental protection information will be promptly forwarded to you. For this reason, you may wish to maintain records of any internal distribution so that updated sheets may be forwarded to the appropriate personnel.

When a Viking Chemical product is resold in the original package with a Viking label, the reseller has the responsibility for ensuring that the Viking MSDS is provided to its purchaser, but we will gladly handle requests for MSDS's directly with them.

We appreciate your patronage and will continue to provide the quality products and service you have come to expect.

Sincerely,

VIKING CHEMICAL COMPANY
Quality Assurance Department

Enclosure(s)



Economics Laboratory, Inc.
St. Paul, Minnesota

Form Approved
Budget Bureau No. 44-11387

3173/0507/3472

Form No. OSHA-005-4
May 1959

U.S. DEPARTMENT OF LABOR

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

B

SECTION I	
MANUFACTURER'S NAME MAGNUS DIVISION, ECONOMICS LABORATORY, INC.	EMERGENCY TELEPHONE NO. 612-224-4678
ADDRESS (Number, Street, City, State, and ZIP Code) Osborn Building, St. Paul, Minnesota 55102	
CHEMICAL NAME AND SYNONYMS N.A.	TRADE NAME AND SYNONYMS MAGNUS SOLVENT
CHEMICAL FAMILY Solvent	FORMULA N.A.

SECTION II HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
Methylene Chloride				30	200ppm
Aromatic Hydrocarbon				30	200ppm
1,1,1 Trichloroethane				30	350ppm

SECTION III PHYSICAL DATA			
BOILING POINT (°F.)	103°F	SPECIFIC GRAVITY (H ₂ O=1)	1.141
VAPOR PRESSURE (mm Hg.)	113	PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	unknown	EVAPORATION RATE (n-Butyl = 1)	> 1
SOLUBILITY IN WATER	negligible	Acetate	
APPEARANCE AND ODOR Clear, Colorless Liquid - Solvent Odor			

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used)	None to boiling	FLAMMABLE LIMITS	N.A.
EXTINGUISHING MEDIA	N.A.	Lel	Uel
SPECIAL FIRE FIGHTING PROCEDURES N.A.			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

SECTION V. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

N.A.

EFFECTS OF OVEREXPOSURE

Inhalation: Severe cases-Narcosis, may resemble alcoholic intoxication, rapid pulse mental confusion. Mild case-Nausea, vomiting, headache. Eyes: Burning, tearing. Skin Contact: Dermatitis.

EMERGENCY AND FIRST AID PROCEDURES

EXTERNAL: Wash skin thoroughly with soap and clean water. Remove contaminated clothing and wash before reuse. EYES: Immediately flush with plenty of running water for at least 15 minutes. INTERNAL: If swallowed, DO NOT induce vomiting. Call a physician immediately. INHALATION: Immediately move to fresh air. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION VI. REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

INCOMPATIBILITY (Materials to avoid)

Strong Oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of Carbon and Chlorine

HAZARDOUS
POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

SECTION VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Use commercial absorbent to remove spill. Dispose of absorbent in accordance with local regulations. Wash area with mild alkaline detergent.

WASTE DISPOSAL METHOD

Dispose of per local ordinances regarding disposal of chlorinated solvents.

SECTION VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Air respirator

VENTILATION

LOCAL EXHAUST

Capture Velocity 50-100 FPM

SPECIAL

MECHANICAL (General)

OTHER

PROTECTIVE GLOVES

Gauntlet type Neoprene Gloves

EYE PROTECTION

Goggles - Face Shield

OTHER PROTECTIVE EQUIPMENT

Neoprene Apron & Boots

SECTION IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Use only with adequate ventilation. Store in a cool place in original container and protect from direct sunlight. Vent off possible internal pressure by cautiously loosening bung.

OTHER PRECAUTIONS

CAUTION: Contains chlorinated solvent. Harmful if swallowed. Avoid prolonged breathing of vapor. Protect skin and eyes from contact with this product-causes irritation. KEEP OUT OF REACH OF CHILDREN.

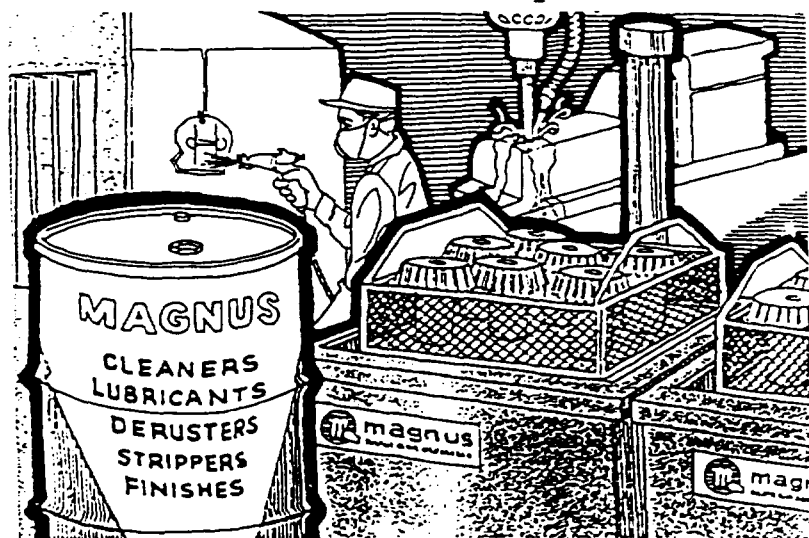
**MAGNUS
SOLVENT
NO. 2**

A Liquid Product

Degreasing of Metal Surfaces

ADVANTAGES

- FAST DISSOLVING ACTION ON GREASES AND OILS
- DRIES QUICKLY AND LEAVES NO RESIDUE
- NON-CORROSIVE TO METALS
- NON-FLAMMABLE AND NON-EXPLOSIVE
- CONTAINS NO CARBON TETRACHLORIDE



Product Use

MAGNUS SOLVENT NO. 2 is used for a wide variety of cleaning jobs where greases and oils, such as cutting and stamping oil are to be removed from metal surfaces. It is particularly suited for a metal cleaning operation where a non-flammable solvent is required.

2455-0902/1173



Printed in U.S.A.

ECONOMICS LABORATORY, INC.
OSBORN BUILDING • ST. PAUL, MINNESOTA 55102

MAGNUS SOLVENT NO. 2

A Liquid Product

PRODUCT DESCRIPTION

MAGNUS SOLVENT NO. 2 is a clear, colorless liquid blend of selected solvents of the chlorinated and petroleum hydrocarbon types.

TECHNICAL DATA

Form: Thin clear liquid
Flash Point: None
Specific Gravity: 1.23
Stability: Very stable
Freeze Point: None

DIRECTIONS FOR USE

MAGNUS SOLVENT NO. 2 can be brushed or wiped over the parts to be cleaned. It can also be used in a tank, wherein the parts to be cleaned are immersed in SOLVENT NO. 2 until clean. A second tank containing SOLVENT NO. 2 is often used for rinsing parts, particularly when very clean work is desired.

In some cases, the use of a coarse spray method at close range is applicable.

To hasten the drying of the parts, an air blow-off may be used.

Keep tanks covered when not in use in order to minimize loss by evaporation.

PRECAUTIONS

Contains chlorinated solvents.

Use only with adequate ventilation.

Avoid prolonged or repeated contact with skin.

Avoid breathing vapor.

Vent off possible internal pressure by cautiously loosening drum bung.

Do not use or store contents near heat or fire.

CONTAINERS

MAGNUS SOLVENT NO. 2 is available in 55 and 15 gallon drums and 5 gallon cans.

MAGNUS METHODS



FOR INDUSTRY

MAGNUS DIVISION

AN ECONOMICS LABORATORY, INC.

OSBORN BUILDING, ST. PAUL, MINNESOTA 55102 (612) 224-4878

U.S. DEPARTMENT OF LABOR

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

15

SECTION I

MANUFACTURER'S NAME MAGNUS DIVISION, ECONOMICS LABORATORY, INC.		EMERGENCY TELEPHONE NO. 612-224-4678
ADDRESS (Number, Street, City, State, and ZIP Code) Osborn Building, St. Paul, Minnesota 55102		
CHEMICAL NAME AND SYNONYMS N.A.		
CHEMICAL FAMILY Solvent	FORMULA [REDACTED]	

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
Orthodichlorobenzene				5	50ppm
Methylene Chloride				10	200ppm
Aliphatic Hydrocarbon				20	500ppm
Perchlorethylene				55	100ppm

SECTION III PHYSICAL DATA

BOILING POINT (°F.)	> 103°F	SPECIFIC GRAVITY (H ₂ O = 1)	1.240
VAPOR PRESSURE (mm Hg.)	58	PERCENT VOLATILE BY VOLUME	100
VAPOR DENSITY (AIR = 1)	unknown	EVAPORATION RATE (n-Butyl = 1)	> 1
SOLUBILITY IN WATER	negligible	Acetate	
APPEARANCE AND ODOR Light yellow liquid - Chlorinated solvent odor.			

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	None	FLAMMABLE LIMITS	None	LFL	UFL
EXTINGUISHING MEDIA	None				
SPECIAL FIRE FIGHTING PROCEDURES	None				
HAZARDOUS REACTIONS	None				
UNSTABLE REACTIONS	None				

SECTION V HEALTH HAZARD DATA

TOXIC MOLE FRACTION

N.A.

EFFECTS OF OVEREXPOSURE

Inhalation: Severe cases-Narcosis, may resemble alcoholic intoxication, rapid pulse, mental confusion. Mild case-Nausea, vomiting, headache. Eyes: Burning, tearing. Skin contact: Dermatitis.

FIRST AID AND FIRST AID PROCEDURES

EXTERNAL: Wash skin thoroughly with soap and clean water. Remove contaminated clothing and wash before reuse. EYES: Immediately flush with plenty of running water for at least 15 minutes. INTERNAL: If swallowed, DO NOT induce vomiting. Call a physician immediately. INHALATION: Immediately move to fresh air. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION VI REACTIVITY DATA

STABILITY

UNSTABLE

STABLE

X

CONDITIONS TO AVOID

INCOMPATIBILITY (Materials to avoid)

Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of Chlorine & Carbon

HAZARDOUS
POLYMERIZATION

MAY OCCUR

WILL NOT OCCUR

CONDITIONS TO AVOID

X

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Absorb with commercially available absorbent. Wash remaining area with mild alkaline detergent.

WASTE DISPOSAL METHOD

Consult local regulations governing the disposal of chlorinated solvents.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Air respirator

VENTILATION

LOCAL EXHAUST

50-100 FPM Capture Velocity

MECHANICAL (General)

SPECIAL

OTHER

PROTECTIVE CLOTHING

Neoprene, Goggles

EYE PROTECTION

Goggles - Face Shield

OTHER PROTECTIVE EQUIPMENT

Neoprene Apron & Boots

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Use only with adequate ventilation. Store in a cool place in original container and protect from direct sunlight. Vent off possible internal pressure by cautiously loosening bung.

OTHER PRECAUTIONS

CAUTION: Contains chlorinated solvent. Harmful if swallowed. Avoid breathing of vapor. Protect skin and eyes from contact with this product.

MAGNUS
SOLVENT
NO. 5

A Liquid Solvent

Cleaning Of Electric Motors

ADVANTAGES

- CONTAINS NO CARBON TETRACHLORIDE.
- NO FLASH POINT AS RECEIVED.
- EVAPORATES COMPLETELY, BUT NOT TOO RAPIDLY.
- LEAVES SURFACES DRY AND CLEAN.
- NO DISAGREEABLE ODOR.
- FAST DISSOLVING ACTION ON OILS AND GREASES.



Product Use

MAGNUS SOLVENT NO. 5 is used for cleaning electric motors, generators, alternators, and similar electrical components. Because of its superior solvency, MAGNUS SOLVENT NO. 5 is also useful for a variety of cleaning and degreasing functions.

MAGNUS METHODS



FOR INDUSTRY

245209030178

Printed in U.S.A.

MAGNUS DIVISION

ECONOMICS LABORATORY, INC.

OSBORN BUILDING • ST. PAUL, MINNESOTA 55102

MAGNUS®

Solvent No. 5

Description

Magnus SOLVENT NO. 5 is a chlorinated solvent degreaser used for cleaning electric motors, generators, alternators, and similar electrical components. Because of its excellent solvency, Magnus SOLVENT NO. 5 is also useful for a variety of cleaning and degreasing functions.

Benefits

- Contains no carbon tetrachloride
- No flash point as received
- Evaporates completely, but not too rapidly
- Leaves surfaces dry and clean
- No disagreeable odor
- Fast dissolving action on oils and greases

ATTACHMENT 6

VENDOR NAME - 98515072

#1	Hydrite Chemical Co., Box 153 Cottage Grove, Wis. 53527	- S.P. N10
----	--	------------

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

≠ recycled product usually available

REQUISITION				PURCHASE							APPROVED BY	DATE
DATE	INITIATED BY	QTY.	DATE NEEDED	DATE	BUYER	QTY. ORD'D.	PRICE	RPO #	VENDOR #	SHIP DATE	DEPT. HEAD	REC'D.
10-17-84	WTS	1	10-31-84	10-22-84	JGN	1	267.00	220974		10-24-84		
10/21/84	WTS	1	1-1-85	1/2/85	JGN	1 recycled	258.00	23568	1	1-9-85		
6-10-85	WTS	1	6-17-85	6/11/85	JGN	1	240.00	240080	1	6-13-85		
9-9-85	WTS	1	9-13-85	9/10/85	JGN	1	246.00	246126	1	9-16-85		
11-20-85	WTS	1	11-25-85	11/22/85	JGN	1 new	267.00	246153	1	11-27-85		
3-25-86	SB	1	3-31-86	3/24/86	JGN	1 new	267.00	244335	1	3-31-86		
6-11-86	SB	1	6-27-86	6/24/86	JGN	1 new	267.00	246360	1	6-25-86		
10-1-86	SB	2	10-3-86	10/2/86	JGN	2	267.00	266135	1	10-3-86		
5-22-90	WTS	3	5-29-90	5/24/90	Mam	3 drums	344.00	230536	1	5-30-90		
10-10-90	WTS	3	10-15-90	10/12/90	"	3 "	344.00	241031	1	10-17-90		
2/14/91	SB	3	2/14/91	2/15/91	"	3 "	372.00	251500	1	2-20-91		

DESCRIPTION Accr. #163240/902250

VENDOR NAME

55 gal. drum Safe-Solv

Reqd. for Repair/Salvage

#1

Viking Chemical, 1827 18th Ave.
Rkfd., IL 61100

cleaning area

#2

#3

#4

#5

REQUISITION

PURCHASE

APPROVED BY
DEPT. HEADDATE
REC'D.

DATE

INITIATED BY

QTY.

DATE
NEEDED

DATE

BUYER

QTY. ORD'D.

PRICE

RPO #

VENDOR #

SHIP
DATE

4-5-88

NMV

1 drum

ASAP

4-6-88

JGN^{MM}1 (55 gal.)^{drum}

4.47/gal.

299043

1

4-8-88

6-2-88

NMV

3 drums

ASAP

6-2-88

JGN^{MM}

3 " "

4.47/gal.

277365

1

w/dep
6-6Bennie
Pan.

ATTACHMENT 7

P. 01/02

FAX NO. 8153378865

VOU*WHT

DEC-20-96 FRI 13:39



Viking Chemical Company

FILE COPY

DIAL (815) 397-0500
1827 18TH AVE. P.O. BOX 1595 ROCKFORD, ILLINOIS 61110

INVOICE DATE

3/10/88

INVOICE NUMBER

77168

MAIL REMITTANCES TO:
VIKING CHEMICAL COMPANY
P.O. BOX 1595
ROCKFORD, ILLINOIS 61110

SOLD
TO

ECOLAB INC.
ATTN: ACCOUNTS PAYABLE
ECOLAB CENTER
ST. PAUL, MN 55102

SHIPPED
TO

ECONOMICS LABORATORY
HWY. 51 & ROCKTON ROAD
80. BELoit, IL 61080

CUST. NO. 0006093000	DEL REC. NO. 46877	CUSTOMER P.O. NO. 298938	ORDER DATE 3/08/88	SALESMAN 06	TERMS NET THIRTY DAYS.		
SHIPPED VIA - OUR TRUCK			FOB DESTINATION				
			PICK UP HTS				
NUMBER	CONT.	PACKING	DESCRIPTION	QUANTITY	UNIT PRICE	UNIT	AMOUNT
0002	EBL	055	6409-B55-20 SAFE-BOLV	110	4.470	GAL	491.70
			CONTAINER CHARGE AT				40.00
0002	EBL	125	5132-B19-20 BWT 7004-BOILER WATER TREATMENT	250	1.410	LBS	352.50
			CONTAINER CHARGE AT				40.00
X CONTAINER TYPE DRUM = DRUM BTL = BOTTLES CTN = CARTONS SMP = SAMPLES BGS = BAGS DOM = DEL DRUM CYL = CYLINDERS T/C = TANK CAR CBY = CARBOYS CAS = CASES MIS = MISC (BULK) T/T = TANK TRUCK UBL = BARRELS CNS = CANS PLS = PAILS T/W = TANK WAGON				FEDERAL EXCISE TAX		SALES TAX	
				.00		52.76	
						PLEASE PAY THIS AMOUNT	
						976.96	

RETURNABLE CONTAINERS ARE THE PROPERTY OF THE SELLER AND ARE LOANED TO THE BUYER. PAYMENT OF DEPOSIT DOES NOT CONVEY TITLE TO SUCH CONTAINERS. CONTAINER DEPOSITS ARE TO BE PAID FOR IN FULL AS INVOICED. FULL REFUND OF DEPOSIT WILL BE MADE PROMPTLY, PROVIDED CONTAINERS ARE RETURNED IN GOOD CONDITION WITHIN 90 DAYS FROM DATE OF INVOICE. CONTAINERS ARE THE SAME AS ORIGINALLY FURNISHED, AND SHOW NO EVIDENCE OF ABUSE OR USE FOR PURPOSES OTHER THAN THE STORAGE OR ORIGINAL CONTENTS. ALL PRODUCTS ARE SOLD WITHOUT WARRANTY OF ANY KIND AND PURCHASERS WILL BY THEIR OWN TESTS DETERMINE SUITABILITY OF SUCH PRODUCTS FOR THEIR OWN USE. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION TO PLANT, WAREHOUSE OR OTHER DESTINATION. ACCOUNTS SUBJECT TO LATE PAYMENT CHARGE AT A RATE OF 1% PER MONTH ON ALL INVOICES NOT PAID WITHIN TERMS OF SALE. NO MATERIAL TO BE RETURNED TO SELLER.

PAY LAST
AMOUNT IN
THIS COLUMN



Viking Chemical Company

COPY

DIAL (815) 397-0500
1827 18TH AVE. P.O. BOX 1595 ROCKFORD, ILLINOIS 61110

INVOICE DATE

6/08/88

INVOICE NUMBER

80468

MAIL REMITTANCES TO:
VIKING CHEMICAL COMPANY
P.O. BOX 1595
ROCKFORD, ILLINOIS 61110

SOLD
TO

ECOLAB INC.
ATTN: ACCOUNTS PAYABLE
ECOLAB CENTER
ST. PAUL, MN 55102

SHIPPED
TO

ECONOMICS LABORATORY
HWY. 51 & ROCKTON ROAD
80, DELUIT, IL 61080
- DELIVER BY MONDAY 6/6

CUST. NO. 0006093000		DEL. REC. NO. 50363	CUSTOMER P.O. NO. 299315	ORDER DATE 6/03/88	SALESMAN 06	TERMS NET THIRTY DAYS.	
SHIPPED VIA - OUR TRUCK			FOR DESTINATION		CHECK FOR MTB		
NUMBER	PACKING CONT.	QUANTITY EACH	DESCRIPTION	QUANTITY	UNIT PRICE	UNIT	AMOUNT
0003 BBL	055	6409-155-20	BAFE-BULV	1.65	4,490	GAL	740.85
			CONTAINER CHARGE AT				60.00
X CONTAINER TYPE DDM = DRUM BTL = BOTTLES CTN = CARTONS SMP = SAMPLES BGS = BAGS DDM = DEL. DRUM CYL = CYLINDERS T/C = TANK CAR CBY = CARBOYS CAS = CASES MIS = MISC (BULK) T/T = TANK TRUCK BBL = BARRELS CNS = CANS PLS = PAILS T/W = TANK WAGON				FEDERAL EXCISE TAX		SALES TAX	
				.00		46.30	
						847.15	

RETURNABLE CONTAINERS ARE THE PROPERTY OF THE SELLER AND ARE LOANED TO THE BUYER. PAYMENT OF DEPOSIT DOES NOT CONVEY TITLE TO SUCH CONTAINERS. CONTAINER DEPOSITS ARE TO BE PAID FOR IN FULL AS INVOICED. FULL REFUND OF DEPOSIT WILL BE MADE PROMPTLY, PROVIDED CONTAINERS ARE RETURNED IN GOOD CONDITION WITHIN 90 DAYS FROM DATE OF INVOICE. CONTAINERS ARE THE SAME AS ORIGINALLY FURNISHED, AND SHOW NO EVIDENCE OF ABUSE OR USE FOR PURPOSES OTHER THAN THE STORAGE OF ORIGINAL CONTENTS. ALL PRODUCTS ARE SOLD WITHOUT WARRANTY OF ANY KIND AND PURCHASERS WILL, BY THEIR OWN TESTS, DETERMINE SUITABILITY OF SUCH PRODUCTS FOR THEIR OWN USE. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION TO PLANT, WAREHOUSE OR OTHER DESTINATION. ACCOUNTS SUBJECT TO PAYMENT CHARGE AT A RATE OF 1% PER MONTH ON UNPAID BALANCE.

**PAYLAST
AMOUNT IN
THIS COLUMN**

ATTACHMENT 8



On Site Solvent Recovery

Nº 2319

P.O. Box 407 • West Dundee, IL 60118

Phone (312) 931-5315

CUSTOMER'S ORDER NO. 288479	ACCOUNT NO.	DATE 11-09-87
NAME ECONOMICS LABORATORY INC.		
ADDRESS HIGHWAY #251 & ROCKTON RD. S.E. BELOTT, IL 61880		

SOLO BY BU	OPERATOR(S) DA	Unit No. 1002	Zone	C.O.D.	On Acct.	Mdse. Retd.	Paid Out
---------------	-------------------	------------------	------	--------	----------	-------------	----------

QUAN.	DESCRIPTION	PRICE	AMOUNT
105	1 Solvent Recovery (21)	5.75	603 75
	2 Solvent Recovery		
	3 Solvent Recovery		
	4		
	5 Drum Deposit		
	6 Drum Lids		
	7 Drum Wrenches		
	8		
	9		
10	TOTAL DUE		603 75

A) Solvent Received	GAL	121			
B) Solvent Recovered	GAL	105			
C) Still Bottom	GAL	16			
Yield %	%	88			

Yield % = B ÷ A × 100 = %

REC'D BY *[Signature]* / Econlab

KEEP THIS SLIP

SOLVENT SYSTEMS INTERNATIONAL INC.
P.O. BOX 407
WEST DUNDEE, ILLINOIS 60118
(312) 931-0100
I N V O I C E

SOLD TO:E114
ECONOMICS LABORATORY, INC
GERRY HALL
HWY 251 & ROCKTON RD.
SOUTH BELOIT IL 61080

SHIP TO
SAME

DATE : 07/20/88 No. 01944 PAGE : 1 DUE DATE: 08/04/88

SHIP VIA F.O.B. YOUR # 299397 OUR # 2918

INVENTORY #	D E S C R I P T I O N	ORDERED	SHIPPED	BACK ORDER	UNIT PRICE	DISC. %	EXTENDED PRICE
	ON-SITE RECYCLING	85 GAL	7/15/88		3.25		276.25
	ON-SITE RECYCLING	110 GAL	7/15/88		5.75		632.50

TOTAL

908.75

On Site Solvent Recovery

Nº 3160

P.O. Box 407 • West Dundee, IL 60118

Phone (312) 931-5315

CUSTOMER'S ORDER NO.	ACCOUNT NO.	DATE 03-07-89
NAME ECOLAB		
ADDRESS 1464 1/2 251 st ROCKTON RD So. BELOTT, ILL. 61080		

SOLD BY BV	OPERATOR(S) DA	Unit No. 1002	Zone	C.O.D.	On Acct.	Mdse. Reld.	Paid Out
QUAN.		DESCRIPTION	PRICE	AMOUNT			
167	1	Solvent Recovery (21)	5.75	960 25			
	2	Solvent Recovery					
	3	Solvent Recovery					
	4						
	5	Drum Deposit					
	6	Drum Lids					
	7	Drum Wrenches					
	8						
	9						
	10	TOTAL DUE		960 25			
A) Solvent Received		GAL	182				
B) Solvent Recovered		GAL	167				
C) Still Bottom		GAL	15				
Yield %		%	92				
Yield % = B ÷ A × 100 = %							
REC'D BY Pam M. Vance							

KEEP THIS SLIP
FOR REFERENCE

On Site Solvent Recovery

Nº 3225

P.O. Box 407 • West Dundee, IL 60118

Phone (312) 931-5315

CUSTOMER'S ORDER NO.		ACCOUNT NO.		DATE	
		E-114		07-14-89	
NAME ECOLAB					
ADDRESS HWY 251 & FAULTON RD So BELOTT, ILL 61080					
SOLD BY BU	OPERATOR(S) BA	Unit No. 100	Zone	C.O.D.	On Acct. X
					Adse Reid
					Paid Out
QUAN.		DESCRIPTION	PRICE	AMOUNT	
123	1	Solvent Recovery (21)	5.75	707.25	
	2	Solvent Recovery			
	3	Solvent Recovery			
	4				
	5	Drum Deposit			
	6	Drum Lids			
	7	Drum Wrenches			
	8				
	9				
	10	TOTAL DUE		707.25	
A) Solvent Received		GAL	138		
B) Solvent Recovered		GAL	123		
C) Still Bottom		GAL	15		
Yield %		%	89		
Yield % = B ÷ A × 100 = %					
REC'D BY [Signature]					

KEEP THIS SLIP
FOR REFERENCE

On Site Solvent Recovery

Nº 3493

P.O. Box 407 • West Dundee, IL 60118

Phone (312) 931-5315

CUSTOMER'S ORDER NO. P21138	ACCOUNT NO. E-114	DATE 01-19-90
NAME ECOLAB		
ADDRESS HWY 251 & ROCKFORD RD & BELLEVILLE, ILL 61080		

SOLD BY BV	OPERATOR(S) DA	Unit No. 100	Zone	C.O.D.	On Acct. X	Mdse. Retd.	Paid Out
----------------------	--------------------------	------------------------	------	--------	----------------------	-------------	----------

QUAN.		DESCRIPTION	PRICE	AMOUNT
110	1	Solvent Recovery (21)	5.75	632.50
	2	Solvent Recovery		
	3	Solvent Recovery		
	4			
	5	Drum Deposit		
	6	Drum Lids		
	7	Drum Wrenches		
	8			
	9			
	10	TOTAL DUE		632.50

A) Solvent Received GAL **115**
 B) Solvent Recovered GAL **110**
 C) Still Bottom GAL **05**
 Yield % % **96**

Yield

Yield % = B + A x 100 = %

REC'D BY *Sam M. Dene*

**KEEP THIS SLIP
FOR REFERENCE**



On Site Solvent Recovery NO 4297

P.O. Box 407 • West Dundee, IL 60118

Phone (708) 931-5315

CUSTOMER'S ORDER NO. 38805	ACCOUNT NO. E114	DATE 9/14/90
NAME ECO 145		
ADDRESS Hwy 251 + Rockton Rd. S. Beloit IL 61080		

SOLD BY BN.	OPERATOR(S) SE	Unit No. 1001	Zone	C.O.D.	On Acct.	Adse. Reid	Paid Out
QUAN.		DESCRIPTION	PRICE	AMOUNT			
110	1	Solvent Recovery 21 Trichlor	345	379	50		
165	2	Solvent Recovery 21 #5 Safety Solu.	525	288	25		
	3	Solvent Recovery					
	4						
2	5	Drum Deposit #23	2800	57	00		
	6	Drum Lids					
	7	Drum Wrenches					
	8						
	9						
	10	TOTAL DUE		158525			
A) Solvent Received	GAL	128	175				
B) Solvent Recovered	GAL	110	165				
C) Still Bottom	GAL	18	30				
Yield %	%	86					
Yield % = B ÷ A × 100 = %							
REC'D BY <i>Sam M. Vance</i> 9-14-90							

12111
5.65/gal.
5.46/gal.

KEEP THIS SLIP
FOR REFERENCE

ATTACHMENT 9



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter III 1/2, Section 1-2. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This has been approved by the Forms Management Center.

02

APPLICATION FOR A PERMIT (A) <input type="checkbox"/> CONSTRUCT <input checked="" type="checkbox"/> OPERATE		FOR AGENCY USE ONLY I. D. NO. <u>201810AAG</u> PERMIT NO. <u>83120016</u> DATE <u>12-07-83</u>	
NAME OF EQUIPMENT TO BE CONSTRUCTED OR OPERATED <u>OPERATION OF MECHANICAL PLANT</u> (B)			

1a. NAME OF OWNER: <u>ECONOMICS LABORATORY</u>		2a. NAME OF OPERATOR: <u>ECONOMICS LABORATORY</u>	
1b. STREET ADDRESS OF OWNER: <u>HWY 51 & ROCKTON ROAD</u>		2b. STREET ADDRESS OF OPERATOR: <u>HWY 51 & ROCKTON ROAD</u>	
1c. CITY OF OWNER: <u>SOUTH BELOIT</u>		2c. CITY OF OPERATOR: <u>SOUTH BELOIT</u>	
1d. STATE OF OWNER: <u>ILLINOIS</u>	1e. ZIP CODE: <u>61080</u>	2d. STATE OF OPERATOR: <u>ILLINOIS</u>	2e. ZIP CODE: <u>61080</u>

3a. NAME OF CORPORATE DIVISION OR PLANT: <u>MECHANICAL PLANT</u>		3b. STREET ADDRESS OF EMISSION SOURCE: <u>HWY 51 & ROCKTON ROAD</u>		
3c. CITY OF EMISSION SOURCE: <u>SOUTH BELOIT</u>	3d. LOCATED WITHIN CITY LIMITS: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3e. TOWNSHIP: <u>ROSCOE</u>	3f. COUNTY: <u>WINNEBAGO</u>	3g. ZIP CODE: <u>61080</u>

4. ALL CORRESPONDENCE TO: (TITLE AND/OR NAME OF INDIVIDUAL) <u>THOMAS GREZEK</u>	5. TELEPHONE NUMBER FOR AGENCY TO CALL: <u>(815) 389-3441</u>
6. ADDRESS FOR CORRESPONDENCE: (CHECK ONLY ONE) <input checked="" type="checkbox"/> OWNER: <input type="checkbox"/> OPERATOR <input type="checkbox"/> EMISSION SOURCE	7. YOUR DESIGNATION FOR THIS APPLICATION: (C) <u>MECH PLANT</u>

8. THE UNDERSIGNED HEREBY MAKES APPLICATION FOR A PERMIT AND CERTIFIES THAT THE STATEMENTS CONTAINED HEREIN ARE TRUE AND CORRECT, AND FURTHER CERTIFIES THAT ALL PREVIOUSLY SUBMITTED INFORMATION REFERENCED IN THIS APPLICATION REMAINS TRUE, CORRECT AND CURRENT. BY AFFIXING HIS SIGNATURE HERETO HE FURTHER CERTIFIES THAT HE IS AUTHORIZED TO EXECUTE THIS APPLICATION.

AUTHORIZED SIGNATURE (S): (D)

BY

SIGNATURE

Thomas L. Grezek

TYPED OR PRINTED NAME OF SIGNER

Plant Manager

TITLE OF SIGNER

RECEIVED

BY

SIGNATURE

IEPA - DAPC - SPFLD

TYPED OR PRINTED NAME OF SIGNER

TITLE OF SIGNER

- (A) THIS FORM IS TO PROVIDE THE AGENCY WITH GENERAL INFORMATION ABOUT THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED. THIS FORM MAY ONLY BE USED TO REQUEST ONE TYPE OF PERMIT - CONSTRUCTION OR OPERATION - AND NOT BOTH.
- (B) ENTER THE GENERIC NAME OF THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED. THIS NAME WILL APPEAR ON THE PERMIT WHICH MAY BE ISSUED PURSUANT TO THIS APPLICATION. THIS FORM MUST BE ACCOMPANIED BY OTHER APPLICABLE FORMS AND INFORMATION.
- (C) PROVIDE A DESIGNATION IN ITEM 7 ABOVE WHICH YOU WOULD LIKE THE AGENCY TO USE FOR IDENTIFICATION OF YOUR EQUIPMENT. YOUR DESIGNATION WILL BE REFERENCED IN CORRESPONDENCE FROM THIS AGENCY RELATIVE TO THIS APPLICATION. YOUR DESIGNATION MUST NOT EXCEED TEN (10) CHARACTERS.
- (D) THIS APPLICATION MUST BE SIGNED IN ACCORDANCE WITH PCB REGS., CHAPTER 2, PART 1, RULE 103(a)(4) OR 103(b)(5) WHICH STATES: "ALL APPLICATIONS AND SUPPLEMENTS THERETO SHALL BE SIGNED BY THE OWNER AND OPERATOR OF THE EMISSION SOURCE OR AIR POLLUTION CONTROL EQUIPMENT, OR THEIR AUTHORIZED AGENT, AND SHALL BE ACCOMPANIED BY EVIDENCE OF AUTHORITY TO SIGN THE APPLICATION."

IF THE OWNER OR OPERATOR IS A CORPORATION, SUCH CORPORATION MUST HAVE ON FILE WITH THE AGENCY A CERTIFIED COPY OF A RESOLUTION OF THE CORPORATION'S BOARD OF DIRECTORS AUTHORIZING THE PERSONS SIGNING THIS APPLICATION TO CAUSE OR ALLOW THE CONSTRUCTION OR OPERATION OF THE EQUIPMENT TO BE COVERED BY THE PERMIT.

9. DOES THIS APPLICATION CONTAIN A PLOT PLAN/MAP:

☒ YES ☐ NO

IF A PLOT PLAN/MAP HAS PREVIOUSLY BEEN SUBMITTED, SPECIFY:

AGENCY I.D. NUMBER _____

APPLICATION NUMBER _____

0226

IS THE APPROXIMATE SIZE OF APPLICANT'S PREMISES LESS THAN 1 ACRE?

☐ YES ☒ NO: SPECIFY _____ ACRES

10. DOES THIS APPLICATION CONTAIN A PROCESS FLOW DIAGRAM(S) THAT ACCURATELY AND CLEARLY REPRESENTS CURRENT PRACTICE.

☒ YES ☐ NO

11a. WAS ANY EQUIPMENT, COVERED BY THIS APPLICATION, OWNED OR CONTRACTED FOR, BY THE APPLICANT PRIOR TO APRIL 14, 1972:

☐ YES ☒ NO

IF "YES", ATTACH AN ADDITIONAL SHEET, EXHIBIT A, THAT:

- (a) LISTS OR DESCRIBES THE EQUIPMENT
- (b) STATES WHETHER THE EQUIPMENT WAS IN COMPLIANCE WITH THE RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION PRIOR TO APRIL 14, 1972.

11b. HAS ANY EQUIPMENT, COVERED BY THIS APPLICATION, NOT PREVIOUSLY RECEIVED AN OPERATING PERMIT:

☐ YES ☒ NO

IF "YES", ATTACH AN ADDITIONAL SHEET, EXHIBIT B, THAT:

- (a) LISTS OR DESCRIBES THE EQUIPMENT
- (b) STATES WHETHER THE EQUIPMENT
 - (i) IS ORIGINAL OR ADDITIONAL EQUIPMENT
 - (ii) REPLACES EXISTING EQUIPMENT, OR
 - (iii) MODIFIES EXISTING EQUIPMENT
- (c) PROVIDES THE ANTICIPATED OR ACTUAL DATES OF THE COMMENCEMENT OF CONSTRUCTION AND THE START-UP OF THE EQUIPMENT

12. IF THIS APPLICATION INCORPORATES BY REFERENCE A PREVIOUSLY GRANTED PERMIT(S), HAS FORM APC-210, "DATA AND INFORMATION--INCORPORATION BY REFERENCE" BEEN COMPLETED.

☐ YES ☒ NO

13. DOES THE STARTUP OF AN EMISSION SOURCE COVERED BY THIS APPLICATION PRODUCE AIR CONTAMINANT EMISSION IN EXCESS OF APPLICABLE STANDARDS:

☐ YES ☒ NO

IF "YES," HAS FORM APC-203, "OPERATION DURING STARTUP" BEEN COMPLETED FOR THIS SOURCE:

☐ YES ☐ NO

14. DOES THIS APPLICATION REQUEST PERMISSION TO OPERATE AN EMISSION SOURCE DURING MALFUNCTIONS OR BREAKDOWNS:

☐ YES ☒ NO

IF "YES," HAS FORM APC-204, "OPERATION DURING MALFUNCTION AND BREAKDOWN" BEEN COMPLETED FOR THIS SOURCE:

☐ YES ☐ NO

15. IS AN EMISSION SOURCE COVERED BY THIS APPLICATION SUBJECT TO A FUTURE COMPLIANCE DATE:

☐ YES ☒ NO

IF "YES," HAS FORM APC-202, "COMPLIANCE PROGRAM & PROJECT COMPLETION SCHEDULE," BEEN COMPLETED FOR THIS SOURCE:

☐ YES ☐ NO

16. DOES THE FACILITY COVERED BY THIS APPLICATION REQUIRE AN EPISODE ACTION PLAN (REFER TO GUIDELINES FOR EPISODE ACTION PLANS):

☐ YES ☒ NO

17. WAS THIS OPERATION THE SUBJECT OF A VARIANCE PETITION FILED WITH THE ILLINOIS POLLUTION CONTROL BOARD ON OR BEFORE JUNE 13, 1972:

☐ YES ☒ NO

IF "YES," CITE: PC3 NUMBER(S) _____, DATE OF BOARD ORDER _____

WAS CONSTRUCTION OR MODIFICATION OF EQUIPMENT, SUFFICIENT TO ACHIEVE COMPLIANCE WITH THE "RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION" EFFECTIVE PRIOR TO APRIL 14, 1972, COMMENCED PRIOR TO APRIL 14, 1972:

☐ YES ☒ NO

IF "YES," EXPLAIN IN DETAIL, AND IDENTIFY EXPLANATION AS EXHIBIT D.

18. LIST AND IDENTIFY ALL FORMS, EXHIBITS, AND OTHER INFORMATION SUBMITTED AS PART OF THIS APPLICATION. INCLUDE THE PAGE NUMBERS ON EACH ITEM (ATTACH ADDITIONAL SHEETS IF NECESSARY):

2 - Sets Form APC-260 Pages 1-6

3 - Sets Form APC-220 Pages 1-3

APPLICATION FOR OPERATING PERMIT ONLY

TOTAL NUMBER OF PAGES _____



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

0227

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so prevent this form from being processed and could result in your application being denied. This form has been approved by the Form Management Center.

*DATA AND INFORMATION
PROCESS EMISSION SOURCE

*THIS INFORMATION FORM IS TO BE COMPLETED FOR AN EMISSION SOURCE OTHER THAN A FUEL COMBUSTION EMISSION SOURCE OR AN INCINERATOR. A FUEL COMBUSTION EMISSION SOURCE IS A FURNACE, BOILER, OR SIMILAR EQUIPMENT USED PRIMARILY FOR PRODUCING HEAT OR POWER BY INDIRECT HEAT TRANSFER. AN INCINERATOR IS AN APPARATUS IN WHICH REFUSE IS BURNED.

1. NAME OF PLANT OWNER: ECONOMICS LABORATORY	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: HWY 51 & ROCKTON ROAD	4. CITY OF EMISSION SOURCE: SOUTH BELOIT

GENERAL INFORMATION		
5. NAME OF PROCESS: DEGREASING METAL PARTS	6. NAME OF EMISSION SOURCE EQUIPMENT: VAPOR DEGREASER	
7. EMISSION SOURCE EQUIPMENT MANUFACTURER: BARON/BLAKESLEE INC.	8. MODEL NUMBER: HL-600	9. SERIAL NUMBER: 22215
10. FLOW DIAGRAM DESIGNATION(S) OF EMISSION SOURCE:		
11. IDENTITY(S) OF ANY SIMILAR SOURCE(S) AT THE PLANT OR PREMISES NOT COVERED BY THE FORM (IF THE SOURCE IS COVERED BY ANOTHER APPLICATION, IDENTIFY THE APPLICATION):		
12. AVERAGE OPERATING TIME OF EMISSION SOURCE: .5 HRS/DAY 2 DAYS/WK 50 WKS/YR		13. MAXIMUM OPERATING TIME OF EMISSION SOURCE: 3 HRS/DAY 4 DAYS/WK 50 WKS/YR
14. PERCENT OF ANNUAL THROUGHPUT: DEC-FEB 20 % MAR-MAY 30 % JUN-AUG 30 % SEPT-NOV 20 %		

* Vapor degreaser compiles with 205K

INSTRUCTIONS
1. COMPLETE THE ABOVE IDENTIFICATION AND GENERAL INFORMATION SECTION.
2. COMPLETE THE RAW MATERIAL, PRODUCT, WASTE MATERIAL, AND FUEL USAGE SECTIONS FOR THE PARTICULAR SOURCE EQUIPMENT. COMPOSITIONS OF MATERIALS MUST BE SUFFICIENTLY DETAILED TO ALLOW DETERMINATION OF THE NATURE AND QUANTITY OF POTENTIAL EMISSIONS. IN PARTICULAR, THE COMPOSITION OF PAINTS, INKS, ETC., AND ANY SOLVENTS MUST BE FULLY DETAILED.
3. EMISSION AND EXHAUST POINT INFORMATION MUST BE COMPLETED, UNLESS EMISSIONS ARE EXHAUSTED THROUGH AIR POLLUTION CONTROL EQUIPMENT.
4. OPERATING TIME AND CERTAIN OTHER ITEMS REQUIRE BOTH AVERAGE AND MAXIMUM VALUES.
5. FOR GENERAL INFORMATION REFER TO "GENERAL INSTRUCTIONS FOR PERMIT APPLICATIONS," APC-201.

DEFINITIONS
AVERAGE - THE VALUE THAT SUMMARIZES OR REPRESENTS THE GENERAL CONDITION OF THE EMISSION SOURCE, OR THE GENERAL STATE OF PRODUCTION OF THE EMISSION SOURCE. SPECIFICALLY: AVERAGE OPERATING TIME - ACTUAL TOTAL HOURS OF OPERATION FOR THE PRECEDING TWELVE MONTH PERIOD. AVERAGE RATE - ACTUAL TOTAL QUANTITY OF "MATERIAL" FOR THE PRECEDING TWELVE MONTH PERIOD, DIVIDED BY THE AVERAGE OPERATING TIME. AVERAGE OPERATION - OPERATION TYPICAL OF THE PRECEDING TWELVE MONTH PERIOD, AS REPRESENTED BY AVERAGE OPERATING TIME AND AVERAGE RATES.
MAXIMUM - THE GREATEST VALUE ATTAINABLE OR ATTAINED FROM THE EMISSION SOURCE, OR THE PERIOD OF GREATEST OR UTMOST PRODUCTION OF THE EMISSION SOURCE. SPECIFICALLY: MAXIMUM OPERATING TIME - GREATEST EXPECTED TOTAL HOURS OF OPERATIONS FOR ANY TWELVE MONTH PERIOD. MAXIMUM RATE - GREATEST QUANTITY OF "MATERIAL" EXPECTED PER ANY ONE HOUR OF OPERATION. MAXIMUM OPERATION - GREATEST EXPECTED OPERATION, AS REPRESENTED BY MAXIMUM OPERATING TIME AND MAXIMUM RATES.

RAW MATERIAL INFORMATION		
NAME OF RAW MATERIAL	AVERAGE RATE PER IDENTICAL SOURCE	MAXIMUM RATE PER IDENTICAL SOURCE
20a.	b. LB/HR	c. LB/
21a. 1,1,1, TRICHLOROETHANE	b. .76 LB/HR	c. .87 LB/
22a.	b. LB/HR	c. LB/
23a.	b. LB/HR	c. LB/
24a.	b. LB/HR	c. LB/

PRODUCT INFORMATION		
NAME OF PRODUCT	AVERAGE RATE PER IDENTICAL SOURCE	MAXIMUM RATE PER IDENTICAL SOURCE
30a. DEGREASED METAL PARTS	b. 8.23 LB/HR	c. 10.28 LB/
31a.	b. LB/HR	c. LB/
32a.	b. LB/HR	c. LB/
33a.	b. LB/HR	c. LB/
34a.	b. LB/HR	c. LB/

WASTE MATERIAL INFORMATION		
NAME OF WASTE MATERIAL	AVERAGE RATE PER IDENTICAL SOURCE	MAXIMUM RATE PER IDENTICAL SOURCE
40a. 1,1,1 TRICHLOROETHANE	b. .74 LB/HR	c. .85 LB
41a.	b. LB/HR	c. LB
42a.	b. LB/HR	c. LB
43a.	b. LB/HR	c. LB
44a.	b. LB/HR	c. LB

*FUEL USAGE INFORMATION		
FUEL USED	TYPE	HEAT CONTENT
50a. NATURAL GAS <input type="checkbox"/>	b. _____	c. 1000 BTU/SCF
OTHER GAS <input type="checkbox"/>		BTU/G
OIL <input type="checkbox"/>	N/A	BTU/G
COAL <input type="checkbox"/>		BTU/L
OTHER <input type="checkbox"/>		BTU/L
d. AVERAGE FIRING RATE PER IDENTICAL SOURCE: BTU/HR		e. MAXIMUM FIRING RATE PER IDENTICAL SOURCE: BTU/H

*THIS SECTION IS TO BE COMPLETED FOR ANY FUEL USED DIRECTLY IN THE PROCESS EMISSION SOURCE, E.G. GAS IN A DRYER, OR COAL IN A MELT FURNACE.

*EMISSION INFORMATION

51. NUMBER OF IDENTICAL SOURCES (DESCRIBE AS REQUIRED):

AVERAGE OPERATION

CONTAMINANT	CONCENTRATION OR EMISSION RATE PER IDENTICAL SOURCE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
PARTICULATE MATTER	52a. GR/SCF	b. LB/HR	c.
CARBON MONOXIDE	53a. PPM (VOL)	b. LB/HR	c.
NITROGEN OXIDES	54a. PPM (VOL)	b. LB/HR	c.
ORGANIC MATERIAL	55a. PPM (VOL)	b. .02 LB/HR	c. RAW MAT/HR - WASTE MAT/HR = EMISSION
SULFUR DIOXIDE	56a. PPM (VOL)	b. LB/HR	c.
** OTHER (SPECIFY)	57a. PPM (VOL)	b. LB/HR	c.

MAXIMUM OPERATION

CONTAMINANT	CONCENTRATION OR EMISSION RATE PER IDENTICAL SOURCE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
PARTICULATE MATTER	58a. GR/SCF	b. LB/HR	c.
CARBON MONOXIDE	59a. PPM (VOL)	b. LB/HR	c.
NITROGEN OXIDES	60a. PPM (VOL)	b. LB/HR	c.
ORGANIC MATERIAL	61a. PPM (VOL)	b. .02 LB/HR	c. RAW MAT/HR - WASTE MAT/HR = EMISSION
SULFUR DIOXIDE	62a. PPM (VOL)	b. LB/HR	c.
** OTHER (SPECIFY)	63a. PPM (VOL)	b. LB/HR	c.

* ITEMS 52 THROUGH 63 NEED NOT BE COMPLETED IF EMISSIONS ARE EXHAUSTED THROUGH AIR POLLUTION CONTROL EQUIPMENT.

*** OTHER CONTAMINANT SHOULD BE USED FOR AN AIR CONTAMINANT NOT SPECIFICALLY NAMED ABOVE. POSSIBLE OTHER CONTAMINANTS ARE ASBESTOS, BERYLLIUM, MERCURY, VINYL CHLORIDE, LEAD, ETC.

*** EXHAUST POINT INFORMATION

64. FLOW DIAGRAM DESIGNATION(S) OF EXHAUST POINT:

65. DESCRIPTION OF EXHAUST POINT (LOCATION IN RELATION TO BUILDINGS, DIRECTION, HOODING, ETC.):

66. EXIT HEIGHT ABOVE GRADE:

16 FT.

67. EXIT DIAMETER:

50 SQ. INCHES

68. GREATEST HEIGHT OF NEARBY BUILDINGS:

25 FT

FT

69. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY:

295 FT

AVERAGE OPERATION

MAXIMUM OPERATION

70. EXIT GAS TEMPERATURE:

AMBIENT

°F

72. EXIT GAS TEMPERATURE:

AMBIENT

°F

71. GAS FLOW RATE THROUGH EACH EXIT:

ACFM

73. GAS FLOW RATE THROUGH EACH EXIT:

ACFM

*** THIS SECTION SHOULD NOT BE COMPLETED IF EMISSIONS ARE EXHAUSTED THROUGH AIR POLLUTION CONTROL EQUIPMENT.

ATTACHMENT 10

ECOLAB

P.O. Box 1018
Beloit, Wisconsin 53511
815/389-3441

Ecolab Inc.
Beloit Operations

→ Terry Switzer, DAPC

November 18, 1987

RECEIVED
DEC 02 1987

IEPA-DAPC-SFFLD.

Illinois Environment Protection Agency
Bharat Mathur, P. E.
Manager, Permit Section
Division of Air Pollution Control

Mr. Mathur:

In regards to our Air Operating Permit, application No. #83120016, I.D. No #201810AAG, the permit was granted to operate emission source(s) and/or air pollution equipment consisting of a 1,1,1, Trichloroethane vapor degreaser, 3 grinders and 2 bag houses.

This will be as notice to you that we no longer use the 1,1,1, trichloroethane vapor degreaser and have removed it from the premises. We also now have 4 grinders instead of 3 grinders.

It should also be noted that our corporate name has changed from Economics Laboratory, Inc. to Ecolab Inc.

Please make the necessary changes and advise us as to any action that may be necessary on our part.

Sincerely,

Gerald J. Hall

Gerald J. Hall
Engineer

/mb

RECEIVED
NOV 30 1987
IEPA/DLPC

ATTACHMENT 11

CONTAMINANT SOURCE EVALUATION - EVERGREEN MANOR SITE

**Prepared for:
Ecolab Inc.**

JANUARY 1997
REF. NO. 9234 (1)
This report printed on recycled paper

CONESTOGA-ROVERS & ASSOCIATES

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1.0 INTRODUCTION

This report has been prepared by Conestoga-Rovers & Associates (CRA) on behalf of Ecolab Inc. (Ecolab) in response to a notice letter from the Illinois Environmental Protection Agency (IEPA) for the Evergreen Manor Groundwater Contamination Site (Evergreen Manor Site) in Roscoe, Illinois. The IEPA provided notice to Ecolab under the Illinois Environmental Protection Act pursuant to Section 58.9(b) by letter dated September 30, 1996. Subsequent correspondence from the Illinois Office of the Attorney General on October 28, 1996 to Ecolab requested a response to IEPA's notice letter. This report provides technical information and hydrogeologic data in support of Ecolab's response to the IEPA.

The IEPA has investigated groundwater conditions at the Evergreen Manor, Olde Farm, Hononegah Heights and Tresemer Subdivisions located in Roscoe, Illinois. The primary contaminant detected above drinking water standards (Federal Safe Drinking Water Act Maximum Contaminant Levels - MCLs) has been trichloroethene (TCE). Other analytes, including tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA) and degradation products related thereto have been observed in water samples collected from Evergreen Manor, Olde Farm and Hononegah Heights Subdivisions. Groundwater samples collected in the Tresemer Subdivision have been non-detect based upon sample analyses presented in the IEPA Screening Site Inspection Report (1992) and the IEPA Expanded Site Investigation Report. Further, these reports indicate that volatile organic compounds (VOCs), other than TCE, measured in the private wells in the Evergreen Manor, Olde Farm and Hononegah Heights Subdivisions, have been below drinking water standards. The Ecolab facility at Highway 251 and Rockton Road near South Beloit and Roscoe, Illinois is located approximately two miles northeast of these subdivisions.

Ecolab has provided the IEPA with requested information on chemical and waste handling practices at its facility on Rockton Road. This information was submitted to the IEPA by Ecolab in September 1995 and in October 1995 in response to the initial 104(e) Information Request made by the IEPA on July 20, 1995 and a Supplemental Request made September 28, 1995. Ecolab's 104(e) responses indicated that beginning sometime after 1975 Ecolab

used small quantities of 1,1,1-TCA in a vapor degreaser and small quantities of cleaning agents with PCE as a component. However, Ecolab has not used products with 1,1,1,-TCA or PCE as components since 1991. Ecolab has not used TCE at any time during its operations.

This report provides data and technical analyses which indicate that the Ecolab facility has not contributed to the TCE and other organic compounds detected in private wells in the subdivisions associated with the Evergreen Manor Site. Information presented in this report supports the conclusion that the Ecolab facility is not responsible for groundwater contamination which has been detected approximately two miles southwest of Ecolab's property. This conclusion is supported by:

- 1) groundwater flow directions measured on the Ecolab property and in the Evergreen Manor Site area;
- 2) the fact that only TCE exceeded MCLs at Evergreen Manor, yet Ecolab has never used TCE at its facility and TCE has never been detected in soils or groundwater samples collected at the facility;
- 3) the absence of any known source area or contaminated soils on Ecolab's property;
- 4) the presence of sources of TCE and other VOCs located both upgradient and downgradient of the Ecolab property;
- 5) groundwater flow velocities that could not support (assuming unattenuated movement by advection) contaminants migrating as far downgradient as Evergreen Manor in the post-1975 to pre-1991 time frames that Ecolab utilized products containing 1,1,1-TCA and PCE; and
- 6) the spatial distribution and variety of VOCs detected in the private wells of the Evergreen Manor Site.

The sources of information supporting CRA's conclusions primarily include documents received in response to Freedom of

Information Act (FOIA) requests to the IEPA, the Illinois Department of Public Health (IDPH) and the United States Environmental Protection Agency (USEPA), and data collected during groundwater investigations completed between November 19 and December 16, 1996 on and in the vicinity of the Ecolab property. CRA also performed an environmental data base search of the Site area through the ERIIS system. Additional information has been provided by personnel at the Ecolab facility and from a review of the 104(e) responses submitted to the IEPA by Ecolab.

Section 2.0 of this report summarizes pertinent data and information on Site conditions which were found in the FOIA response documents. Section 3.0 summarizes CRA's field investigations and the results of those studies. Section 4.0 of this report summarizes CRA's conclusions based upon review of historical information and based upon the recent groundwater investigations.

2.0 BACKGROUND AND SUMMARY OF EXISTING SITE CONDITIONS

2.1 SITE AREA DEFINITION

The Evergreen Manor Site is located east and northeast of the Rock River, near Roscoe, Illinois. The Site includes housing subdivisions located along the Rock River to the south and extends to the north and northeast toward McCurry Road (Figure 1). The IEPA has defined the Site so as to include the Evergreen Manor, Olde Farm, Hononegah Heights and possibly the Tresemer Subdivision where groundwater has been impacted by TCE at concentrations exceeding the MCL and by other chlorinated solvents at concentrations below MCLs. The Evergreen Manor Site, as defined by the IEPA, also includes industrial and commercial properties located along Highway 251 and Rockton Road. The areas identified by the IEPA also include properties owned by Waste Management of Wisconsin Inc. (formerly AAA Disposal System Inc.), Regal-Beloit Corp., and Ecolab, and each company was issued a Section 58.9 (b) notice by the IEPA. Additional commercial and industrial facilities are located in the vicinity of the Evergreen Manor Site and according to IEPA's Table 2-1 of the CERCLA Screening Site Inspection Report (1992), these include:

- Warner Electric Brake and Clutch (Warner Electric),
- Kelley Sand and Gravel,
- Roscoe Ready Mix,
- Stateline Storage,
- Roscoe Sand and Gravel,
- Stateline Printing Company,
- Kenny's Cars, Trucks and Equipment,
- State Line Foundries,
- Taylor Design,
- Inlander-Steindler Paper Company,
- Midwest Precision Grinding,
- Makerite Manufacturing,
- McGuire Brothers Auto Body,
- Rockford Steam Boiler Works,
- Oscar's Auto Battery and Clinic,

- Dayles Welding,
- Armour Specialty, Inc.,
- RD Systems,
- Area Elevator and DGM,
- Electro Cam Corporation,
- Preston 151,
- Indicon Midwest,
- Top Die Casting Company,
- Ruan,
- Elevator (Grain), and
- RBR Trucking.

According to IEPA, the Evergreen Manor Site area generally comprises an area extending two miles in length and approximately one half mile in width, oriented in a northeast-southwest direction.

The Evergreen Manor Site has been distinguished by IEPA from the nearby Warner Electric Site which includes the Hononegah Country Estates Subdivision and Morehaven Subdivision. The Warner Electric Site involves the contamination of groundwater, also by TCE and other chlorinated solvents, which originates at the Warner Electric facility along Highway 251 and McCurry Road and extends toward the Rock River (Figure 1). Similar chemicals have been detected in the groundwater at the Warner Site as those detected at the Evergreen Manor Site, predominantly TCE. The IEPA has suggested that two "plumes" resulting from different sources have contaminated groundwater in the Evergreen Manor Site and the Warner Electric Site (IEPA Screening Site Inspection Report, September 1992). The plumes of the two Site areas are separated by approximately 1,500 to 2,000 feet, according to IEPA documents.

2.2 SITE AREA HISTORY AND PREVIOUS STUDIES

The TCE contamination of groundwater at the Warner Electric Site was discovered in 1983 during a Winnebago County Public Health Department study of nitrate contamination of private well water in

the Hononegah Country Estates Subdivision. Due to concerns about elevated nitrate levels in groundwater, Winnebago County authorities had originally included installation of a public water supply as a condition to permitting development of the subdivision; however, a public water supply was not installed as the subdivision developed. Therefore, it is apparent that prior to the discovery of TCE in private wells in the Evergreen Manor Site area, there were already concerns regarding regional groundwater quality.

In response to TCE contamination impacts detected in initial studies, the IEPA installed monitoring wells and completed additional studies in 1983 (Greetis, August 1983). An additional study was completed by H. Wehrmann of the Illinois Department of Energy and Natural Resources (Wehrmann, August 1984). In 1986 the IEPA undertook a two year study of groundwater contamination in Winnebago County. According to an IEPA Groundwater Study Report dated November 1988, approximately 28 percent of the public water supply wells in Winnebago County have shown quantifiable levels of at least one VOC (primarily TCE and PCE) (Clarke and Cobb, November 1988).

During 1983 to 1985 Warner Electric performed a series of soil and groundwater studies on their facility located to the northeast of the contaminated private wells in the Hononegah County Estates Subdivision. Warner Electric installed a deep bedrock water supply well and a water distribution system for certain impacted residences. Other remedial actions have been completed by Warner Electric, including the closure of two surface impoundments and removal of 16,000 tons of TCE-contaminated sludges. During 1983 to 1984, the Warner Electric facility also closed out TCE and other storage tanks and a barrel storage area, and decontaminated utility trenches. Groundwater investigations were initiated at this facility as early as 1983.

In 1990 groundwater samples were collected at a private well in the Evergreen Manor Subdivision and TCE was detected above MCLs. The Illinois Department of Public Health (IDPH) initiated an area-wide sampling program of private wells in the area. Results indicated that 89 of the 179 private wells sampled contained detectable concentrations of chlorinated solvents with TCE being the primary contaminant of concern. The USEPA performed a soil gas survey in 1992 at areas upgradient

(northeast) of the impacted subdivisions. The IEPA completed a monitoring well installation and sampling program during 1993 to 1995. Of the 24 monitoring wells installed primarily to the northeast of the impacted subdivisions, three monitoring wells had concentrations above the MCLs. The IEPA conducted a records review and site reconnaissance in 1994 in order to assess potential sources of the VOC contamination. This process included the issuance of 104(e) letters in 1995 to a number of commercial and industrial facilities.

The IEPA, USEPA and their contractors have issued a number of reports and data packages regarding the Evergreen Manor Site. These have included:

- a Preliminary Assessment Report (IEPA, January 1992);
- a Soil Gas Survey Report for the Evergreen Manor Subdivision (Lockheed Engineering, June and August 1992);
- a Screening Site Inspection Report (IEPA, September 1992);
- a Monitoring Well Installation Report (Riedel Environmental, February 1994);
- an Expanded Site Inspection Report (IEPA, undated); and
- groundwater sampling results (IEPA, 1994 and 1995).

2.3 HYDROGEOLOGIC CONDITIONS

The report prepared by Wehrmann in August 1984 provides an overview of hydrogeologic conditions in both the Evergreen Manor and the Warner Electric Site areas. In addition, Wehrmann's previous report (August 1983) also contains information on area hydrogeologic conditions. The following discussion presents a summary of pertinent hydrogeologic conditions as they apply to the Evergreen Manor Site.

The area is underlain by a deep bedrock valley trending north-south, which has been filled by glacial and fluvial sediments. The bedrock comprises the St. Peter Sandstone and is found at depths of over 200 feet in the Site area. The surface of the bedrock is deepest to the west of the Site area near the Rock River. The bedrock surface rises to the east and to the west of the Rock River Valley. The bedrock valley has been filled predominantly with glacial outwash sands and gravels.

The glacial fluvial deposits encountered beneath the Site area are highly permeable and water supply wells usually have large yields. Wells drilled in the upper 100 feet of these glacial fluvial deposits have reported yields as high as 600 to 800 gpm. The surface soils are also highly permeable, resulting in significant amounts of precipitation recharge to the underlying sand and gravel deposits. The hydraulic conductivity of the upper 100 feet of the sands and gravels ranges from 3.1×10^{-2} cm/sec to 1×10^{-1} cm/sec (Wehrmann, August 1984). Depth to water in the sand and gravel deposits underlying the Site area is in the range of 30 to 40 feet below ground surface. The water table generally follows the topographic grade and slopes toward the Rock River Valley.

The IEPA monitoring wells installed in 1993 are generally grouped into clusters. These clusters contained one shallow monitoring well, approximately 45 to 50 feet deep, and one deep monitoring well, approximately 60 to 80 feet deep. The water levels measured in the wells have generally been similar, suggesting predominantly horizontal flow within the upper 100 feet of the sand and gravel deposits. Significant downward or upward hydraulic gradients have not been observed in the Site area.

Regional groundwater flow directions have generally remained constant over the last 14 years of investigations in the Evergreen Manor Site area. Groundwater flow directions based upon water level measurements made by Wehrmann in 1982 as part of the nitrate study are similar to those measured in 1983 by Wehrmann and later in 1992 and 1995 by the IEPA. Groundwater flow in the upper 100 feet of the sand and gravel deposits was generally to the southwest and towards the Rock River. The

westerly component of flow, however, varies with the distance from the river. Groundwater flow direction in the southern portions of the Site and closer to the Rock River has a smaller westerly component. The groundwater flow direction developed by the IEPA in 1993 to 1995 using monitoring wells farther north and east of the Rock River have indicated flow more to the west southwest. Regional groundwater flow directions depicted by Wehrmann (August 1983) also demonstrate a westerly component of groundwater flow in areas northwest of the Evergreen Manor Site.

Groundwater flow velocity in the Evergreen Manor Site area has been estimated by Wehrmann (August 1984) to average close to one foot per day (365 feet per year). This value is based upon the following Darcy's Law calculations presented by Wehrmann (August 1984) on pp. 50:

$$V_a = \frac{Ki}{n_e}$$

where:

V_a	=	advective velocity
K	=	hydraulic conductivity
n_e	=	effective porosity
i	=	hydraulic gradient

specifically at the Evergreen Manor Site:

$$\begin{aligned} K &= \frac{800 \text{ gallons per day}}{\text{ft}^2} = 107 \text{ ft/day} \\ i &= 0.0022 \text{ ft/ft} \\ n_e &= 0.25 \end{aligned}$$

and $V_a = 0.94 \text{ ft/day}$ or 1 ft/day

Using this calculated average horizontal groundwater velocity, the time required for groundwater originating in the area of Rockton Road and Highway 251 to travel to the Rock River near the Evergreen Manor Subdivision would be approximately 30 years.

2.4 DISTRIBUTION OF VOCs IN GROUNDWATER AT THE EVERGREEN MANOR SITE

Studies by the IEPA, USEPA and the Winnebago Department of Public Health have delineated an area of groundwater impacted by VOCs. These VOCs have included primarily chlorinated solvents such as TCE, PCE, 1,1,1-TCA and their degradation products. TCE has been the only unqualified VOC detected above MCLs in private wells within the subdivisions (Expanded Site Inspection Report). This information has been documented in numerous reports by the IEPA. Figure 2 presents a summary of VOCs detected in IEPA monitoring wells in the area of the Evergreen Manor Site. Figure 3 outlines the general extent of VOCs detected in private wells in the subdivisions.

The results of groundwater sampling performed to date by the IEPA and others suggest the following trends:

- VOCs detected in the private wells in the Evergreen Manor Subdivision and nearby subdivisions are dominated by TCE with lesser concentrations of 1,1,1-TCA, and TCE degradation or transformation products (such as cis-1,2-DCE).
- The extent of detectable concentrations of TCE in private wells in the Evergreen Manor and nearby subdivisions is from McCurry Road on the north to the Rock River on the south. The detectable VOCs extend from the east at Straw Lane and Hononegah Road to the west toward Tresemer Road and Hononegah Road (Figure 3).
- The highest concentrations of TCE are measured in private wells located in the eastern subdivisions and centered along Blue Spruce Drive.
- Past sampling events at the IEPA monitoring wells located north of the subdivisions indicate that TCE was not observed at areas northeast of the AAA Disposal/WMI facility.

- The VOCs detected most frequently in monitoring wells northeast of the AAA Disposal/WMI facility and in areas north of Rockton Road were from samples collected in the shallower monitoring wells. In general, monitoring wells completed at depths of 40 to 60 feet below grade indicated higher concentrations than the deeper wells at the same location.
- Past sampling events at the IEPA monitoring wells located southwest of the AAA Disposal/WMI facility have indicated the most frequently detected VOCs to include TCE, PCE and 1,1,1-TCA.
- The VOCs detected in monitoring wells south and west of the AAA Disposal/WMI facility were most frequently detected in deeper monitoring wells. Groundwater quality data reviewed to date indicates that the deeper zone (depths of 60 to 80 feet below grade) was more contaminated than the shallow groundwater zone in the area southwest of the AAA Disposal/WMI facility.
- Groundwater samples collected from the Ecolab production wells (125-150 feet deep) in 1983 did not detect VOCs.
- A groundwater sample collected from a third Ecolab production well (servicing the storage garage) in November 1996 did not indicate detectable VOCs.
- A soil gas survey performed in 1992 by Lockheed Engineering for the IEPA and USEPA did not detect concentrations of TCE, 1,1,1-TCA and 1,1-DCE on the Ecolab property. A grab groundwater sample collected during the soil gas survey did not detect VOCs. This grab groundwater sample was collected below the basin of the former rinse water impoundment.
- A groundwater sample collected from the AAA Disposal/WMI facility production well in 1983 indicated the presence of TCE, PCE, 1,1,1-TCA and other VOCs.

- VOC-contaminated groundwater has been documented at the Warner Electric facility at the southeast corner of McCurry Road and Highway 251 and extending to the southwest toward the Hononegah Country Estates Subdivision east of the Evergreen Manor Site. VOC contamination in this area is primarily by TCE.
- Depth of groundwater contamination at the Evergreen Manor Site and at the Warner Electric Site is generally limited to depths of less than 100 feet based upon the existing monitoring well data.
- Assuming groundwater flow velocities of approximately 365 feet/year estimated by Wehrmann (August 1984), a distance of approximately two miles from Rockton Road at Highway 251 to the Evergreen Manor Subdivision and that contaminant migration is by an advective mechanism without attenuation of any sources, this location would need to have been active with chlorinated solvents as early as 1960 to 1965. Specifically, VOCs, if released to groundwater at the Ecolab facility, would have had to enter the underlying groundwater by approximately 1960 to 1965.
- The only contaminant exceeding IEPA's 35 IAC 620 Class I standards or MCLs at the Evergreen Manor Subdivision is TCE. Ecolab neither used TCE nor observed it in monitoring wells or soils located on its property.
- The concentration of PCE observed in one well along the former railroad tracks on the western margin of Ecolab's property (G103s) in December 1996 is much lower than the maximum TCE concentrations observed approximately two miles away at the Evergreen Manor Site. These concentration differences indicate that the PCE detected on the Ecolab property could not be the source of TCE through degradation and transformation process in the groundwater system.

Groundwater sample data from monitoring wells installed and sampled by the IEPA in 1994 and 1995, along with recent sampling data collected by CRA in November and December 1996, indicate that the spatial distribution and variety of VOC contamination are different in locations north of the AAA Disposal/WMI facility from those observed south of this facility. The area of groundwater contamination corresponding to the areas along Rockton Road, northeast of AAA Disposal/WMI, is characterized by the shallow occurrence of chlorinated solvents, predominantly PCE and 1,1,1-TCA (but not TCE). The area of groundwater contamination located to the south and west of the AAA Disposal/WMI facility is characterized by the occurrence of different chlorinated solvents such as TCE and cis-1,2-DCE. PCE and 1,1,1-TCA are also detected in this area, but VOC contamination occurs predominantly in the deeper groundwater zone.

2.5 POTENTIAL SOURCES OF VOC CONTAMINATION AT THE EVERGREEN MANOR SITE

A number of potential sources have been identified by the IEPA in the past (Screening Site Inspection Report, September 1992) and 104(e) request letters have been submitted to some of these industries. CRA's review of the IEPA documents received in response to FOIA requests and review of 104(e) responses have indicated the following facilities as sources of VOCs contributing to groundwater contamination in the vicinity of the Evergreen Manor Site:

- Waste Management of Wisconsin Inc./AAA Disposal;
- Regal-Beloit Corporation; and
- Warner Electric.

The following additional potential sources were identified in an ERIIS search performed by CRA (Appendix A):

- State Line Foundries;
- Makerite Manufacturing;
- Electro Cam Corporation;
- a former landfill associated with the Beloit Foundry Co.;
- COLTEC, formerly Colt Industries;
- a former landfill located behind the Stateline Printing facility;
and
- Kelley Sand and Gravel.

Regal-Beloit:

The Regal-Beloit facility, located just north and east of the Ecolab facility, is a potential source for groundwater contamination at the Evergreen Manor Site. This facility has operated continuously since 1955 and, therefore, historical releases of VOCs have had sufficient time to travel to the Evergreen Manor Subdivision in the groundwater. The Regal-Beloit facility has been involved with the manufacture of steel cutting tools and has used chlorinated solvents as part of manufacturing and maintenance operations. Solvents were used in degreasing prior to heat treatment of the products. Reportedly, 1,1,1-TCA replaced TCE use in 1982, although there is some indication of later TCE use based upon a 1986 IEPA inspection report.

According to its 104(e) response, the facility has generated a total over 600 gallons of waste 1,1,1-TCA solvents from 1982 to 1993. The same response indicated that Regal-Beloit generated an estimated total of more than 600 gallons of spent "1,1,1-Trichloroethylene" from 1982 to 1994. (This chemically-incorrect compound name apparently refers to TCE.) The use of TCE at the Regal-Beloit facility is further supported by detected concentrations of the compound in soils and water samples collected in their septic system in 1984 and the presence of TCE in soils around its hazardous waste storage facility.

Potential sources of TCE and 1,1,1-TCA groundwater contamination at the Regal-Beloit facility which may have released these and other VOCs to the underlying groundwater include:

- a hazardous waste storage facility which was closed under RCRA in 1987;
- five underground storage tanks (USTs) which were closed in 1986. These tanks ranged in size from 1,000 gallons to 1,500 gallons and contained lube oil, mineral spirits, cutting oil, and used oil/water (two tanks);
- a septic system and leach field which was investigated in 1984; and
- according to the ERIIS search performed by CRA (Appendix A), a landfill existed in the vicinity of the property which contained municipal sewage sludge, industrial hazardous solid waste and hazardous liquid wastes.

The Regal-Beloit facility had a RCRA part A Permit and was inspected by the IEPA on numerous occasions. In the May 9, 1986 inspection report, IEPA staff described the Site as containing ponded oil one inch deep in areas. Regal-Beloit was informed that the site would have to be cleaned up to regain compliance with the Environmental Protection Act.

The hazardous waste storage facility was discontinued in 1985, but had been permitted under RCRA for the storage of hazardous wastes. Reportedly, drums of waste solvents and other materials were stored at this facility. The closure plan was implemented in 1986 and confirmatory samples were collected in 1987. Soil samples indicated the presence of TCE and 1,1,1-TCA.

Five USTs were used at the Regal-Beloit facility until 1986. These USTs were apparently used for the storage of lube oil, mineral spirits, cutting oil, and used oil/water (two tanks). These tanks ranged from 1,000 to

1,500 gallons, were of steel construction and were installed in approximately 1970. Apparently, no confirmatory sampling was performed upon removal of the tanks.

The septic system at Regal-Beloit was investigated in 1984 at the request of the IEPA. This system received discharges of rinse water from the chrome plating line and from a nitride case hardening process. Composite soil samples were collected and grab water samples were collected below the water table. Most samples were analyzed for metals; however, a septic residue sample and water sample were analyzed for select VOCs and indicated the presence of PCE and 1,1,1-TCA.

In summary, because there is documentation indicating the release of TCE, PCE and 1,1,1-TCA to soils and groundwater at the Regal-Beloit facility, and because the facility operations have a history which would allow the over 30 years of travel time to the Evergreen Manor private wells, the facility should be considered a source of contamination at the Evergreen Manor Site. In addition, because the Regal-Beloit facility is located upgradient of the Ecolab facility, it should also be considered a source of groundwater contamination detected in monitoring wells on the Ecolab property.

Waste Management of Wisconsin/AAA Disposal

The Waste Management of Wisconsin/AAA Disposal facility is located south of the Ecolab property. The facility first operated as AAA Disposal sometime around 1973 until 1988 when Waste Management of Wisconsin purchased the operations. The facility has operated as a waste hauling and transfer station. The facility contained fuel storage USTs ranging in size from 10,000 gallons to 600 gallons. Apparently, in 1993 during removal of an UST at the facility the representative from the State Fire Marshall's office observed solvent odors at the UST excavation. According to the 104(e) response from Waste Management of Wisconsin, the facility contained dry wells, which have been subsequently abandoned. Truck washing and maintenance was part of the waste hauling and transfer operations.

The IEPA Division of Land Pollution Control inspected the facility in February 1975. At that time it was observed that waste oil and septic tank pumpings were being accepted at the facility without proper permits. The inspection also indicated the presence of drums containing hazardous liquids. During a March 24, 1976 inspection, an IEPA representative observed a large volume of oily waste material deposited in an excavation located along the railroad tracks on the east side of the property. During a later IEPA inspection on September 20, 1977, an IEPA representative observed several oily-liquid disposal areas near the railroad tracks along the east side of the property.

As mentioned previously, the production well at the AAA Disposal facility was sampled by the Winnebago Department of Public Health in 1983 and samples indicated concentrations of TCE, PCE, 1,1,1-TCA and other VOCs ranging from 12 to 107 parts per billion (ppb). Soil samples collected at the facility for Waste Management of Wisconsin in 1988 detected fuel components such as benzene, toluene and xylene. Monitoring wells were installed on the facility in 1989 and groundwater samples indicated the presence of PCE, 1,1,1-TCA and TCE in the 2 to 10 ppb range. In addition, PCE was detected in soils collected as part of the 1989 groundwater study. Foundry sands present on a portion of the AAA Disposal/WMI facility were also sampled in 1989 and some of these samples indicated the presence of TCE and PCE. The AAA Disposal/WMI facility also responded to the IEPA in February 1994 regarding a floor drain in the transfer station which drained to a septic system.

This facility should be considered as a source of groundwater contamination at the Evergreen Manor private wells and at areas west of Highway 251 and north of McCurry Road.

Warner Electric

Although the Warner Electric facility is located due east of the Evergreen Manor Site and has been identified by IEPA as a separate groundwater contamination Site, CRA considers this facility as a potential

source of TCE and other VOC contamination of the private wells in the Evergreen Manor Subdivision. Studies have been performed at the Warner Electric facility in response to the groundwater contamination at the Hononegah Country Estates Subdivision and as a result of RCRA requirements at the facility. These studies and history of the Site are located in the IEPA files for the Warner Electric Site.

The Warner Electric facility should remain under consideration as a source for the Evergreen Manor Site contamination because there have been documented releases of TCE, 1,1,1-TCA, and PCE at the facility, and because there is a westerly component of groundwater flow at the facility. The Warner Electric facility has documented the use of large quantities of chlorinated solvents such as TCE, PCE and 1,1,1-TCA which are detected in the private wells in the Evergreen Manor Site. Waste streams containing chlorinated solvents generated at the facility included waste paint-related materials (F005), still bottoms (F002) and used solvents (F001). At one time, the facility used four large degreasers. In 1989 the facility generated two drums of still bottoms per year and about 84 drums of waste solvents per year. Prior to 1977, open trenches were located in the process area and were connected to surface impoundments. In 1983 Warner Electric removed 16,000 tons of contaminated sludges containing TCE from the impoundments. In addition, TCE and other underground storage tanks (with capacities of 8,000 gallons) and the barrel storage area were closed. Information reviewed for the Warner Electric facility indicates that hazardous wastes generated in 1983 were as high as 109,000 gallons/year and were reduced to approximately 22,000 gallons/year by 1985. These waste streams would have included TCE and other chlorinated solvents.

TCE is the predominant chlorinated solvent detected in the private wells at the Evergreen Manor Site and the only VOC above MCLs. The Warner Electric Facility should be considered a source of groundwater contamination due to the long history of heavy TCE use and the presence of a westerly component of groundwater flow on the facility.

State Line Foundries

The State Line Foundries facility is located just north of the AAA Disposal/WMI facility. The foundry is located northeast and upgradient of monitoring wells installed by the IEPA which indicate the presence of VOCs. The foundry has been in operation since at least 1956 and has been operating as State Line Foundries since 1969. The facility manufactures gray and ductile iron castings.

As part of operations, the foundry generates foundry sand wastes and paper wastes. The facility contains two USTs, one for gasoline storage and one for water storage. A septic system and leach field exists on the facility for sanitary purposes. The facility has also utilized a parts washer which has been supplied by Safety-Kleen since 1995. No information was available in the 104(e) response or FOIA response regarding pre-1995 parts washing practices.

Because the State Line Foundries facility is located upgradient of monitoring wells with VOC contamination, because it has been in operation since at least 1956, and because the 104(e) response indicated the use of a parts washer, this facility should be considered a potential source of groundwater contamination.

Makerite Manufacturing Co.

This facility is located north of Ecolab and is involved with precision machining for the aerospace industry. Although the facility has only been in operation since 1978, it is reviewed as a potential source of the groundwater contamination which has been detected on the Ecolab property. The facility is classified as a small quantity generator under RCRA, generating less than 1,000 kg of solvent wastes (D001) per month. The facility currently uses two parts washers from which waste solvents are generated at the rate of 40 to 50 gallons per month. Makerite also generates a water soluble coolant waste, which is stored in two 250-gallon tanks.

Electro Cam Corporation

The Electro Cam Corporation facility, located north of the Ecolab facility, is listed in the Illinois Underground Storage Tank Report (a comprehensive listing of all registered USTs located in Illinois). The registered tank(s) has/have been closed. Electro Cam Corporation is involved with the manufacturing of electronic rotary cam limit switches. The facility's sewer system consists of a septic tank and leach field. The facility filed a Class V Injection Well Inventory form in December 1994. Operations at this facility generate waste solvents from parts washers (D001). Waste manifests provided as part of the 104(e) response indicate waste aliphatic and aromatic hydrocarbons. Consequently, this facility should be considered as a potential source of groundwater contamination, at least in the area of Ecolab.

Former Landfill Associated with the Beloit Foundry Co.

According to the information presented in the ERIIS database search (Appendix A) the Beloit Foundry Co. has reportedly closed a landfill located northeast of the Regal-Beloit facility. The former landfill site is listed in the Illinois Land-Based Disposal Site (LBDS) Report, an inventory of all active and historical waste disposal sites located in Illinois. The waste streams disposed of in the landfill are described in the ERIIS Report as non-hazardous waste and unknown waste. Due to the limited information about the location of this site and the lack of detailed reporting, this facility may be considered as a potential source of groundwater contamination.

Colt Industries/Fairbanks Morse

The Colt Industries facility (formerly known as the Fairbanks Morse facility and currently named COLTEC), located approximately 1.3 miles east of the Ecolab facility, is listed in the Resource Conservation and Recovery Information System - Small Quantity Generators Report by both names. This report contains information pertaining to facilities which either generate between 100 kg and 1,000 kg of EPA regulated hazardous waste per month or meet other applicable requirements of the

Resource Conservation and Recovery Act. Hazardous wastes listed for the facility are solid wastes (EPA Hazardous Waste Numbers D001 and D002), solvents (F001 and F002) and methyl chloroform (U226). Due to the known presence of solvents, this facility should be considered as a potential source of groundwater contamination.

Former Landfill Behind the Stateline Printing Facility

A landfill located behind the Stateline Printing facility appears in the ERIIS-LBDS Report. The waste type for the landfill is described as non-hazardous waste. This location may be considered a potential source of groundwater contamination.

Kelley Sand and Gravel

This facility is located at the southwest corner of Highway 251 and McCurry Road. On March 19, 1974 an IEPA representative observed open dumping and waste material on the Kelley Sand and Gravel property. The waste apparently included some foundry sand. On April 23, 1974, the IEPA also observed refuse dumped on the property. Given the open-pit nature of sand and gravel mining operations and the facility's location northeast and upgradient of the Evergreen Manor Subdivision, this facility should be considered as a potential source of groundwater contamination.

Other Potential Sources

Other potential sources of VOCs detected at the Evergreen Manor Site and at the Ecolab property may exist in the industrial park north of Ecolab. However, existing IEPA file information is insufficient to identify any one company specifically based on chemical and waste handling records.

2.6 EVALUATION OF THE ECOLAB FACILITY

CRA's review of Ecolab's 104(e) responses, purchasing records and MSDS sheets, discussions with facility personnel on November 11 and December 16, 1996, and assessment of groundwater data on the Ecolab facility provide sufficient information to evaluate whether or not Ecolab is a potential source of the groundwater contamination at the Evergreen Manor Site. Based on CRA's review, this facility has not contributed to the TCE and other VOC contamination measured in private wells at the Evergreen Manor Site.

2.6.1 Plant Operations

The Ecolab facility produced soap and detergent cleaning products for the food industry from approximately 1959 to July 1974. TCE, PCE and 1,1,1-TCA were not used at the facility during this time.

After 1975, the plant assembled dispensing equipment for cleaning products. Ecolab's assembly operation involved the welding and fabricating of stainless steel equipment. In order to remove film and grit, it became necessary to use degreasing agents in the assembly process. A 120-gallon Baron/Blakeslee Inc. vapor degreaser (Model HL-600) was installed at the facility sometime between 1975 and 1978.

The vapor degreaser was located in the "Salvage Department", but was small enough to be moveable. According to the 1983 Air Permit Application, it was used on the average for one-half hour per day for just two days a week. This vapor degreaser used inhibited (or stabilized) 1,1,1-TCA. Solvent levels or volumes were not replenished on a continuous basis. The solvent was used in the unit until the liquid level was down to the sludge. At that point in time, the unit was moved to a loading dock area within the plant building and the sludge removed and containerized in 55-gallon drums. The cleaning of the vapor degreaser occurred approximately every one to two years.

In May 1987, the use of the vapor degreaser was discontinued because Ecolab ceased manufacturing equipment that required the degreasing operation. After 1987, other parts and equipment required cleaning, and this was accomplished for approximately one year with a "Magna" parts washer and two five-gallon parts washers. In approximately 1988/1989, three small "Miji" parts washers replaced the "Magna" parts washer. The "Mijis" were closed systems with liquid capacities of approximately fifteen to twenty gallons. Reportedly, the small parts washers used primarily petroleum distillate solvents referred to as Mangus No. 2 and Magnus No. 5. The Magnus No. 2 contained 30% 1,1,1-TCA and the Magnus No. 5 contained 55% PCE. Viking Safe-Solv, which contained 25% PCE, was used in 1988. The use of these solvents in the small parts washers was discontinued in 1991. TCE was never used at the Ecolab facility.

The materials used in the vapor degreaser and in the small parts washers were stored inside the plant in a locked, bermed and fireproofed storage room. The waste solvents and the sludge generated from the degreasing units were also stored in this room, all in 55 gallon drums. During 1987 to 1990, the solvents were recycled at the plant by an outside vendor. At all times, all waste solvents and sludges were shipped off-site for disposal.

According to plant records from 1984 to 1991 the Ecolab facility purchased only 990 gallons of 1,1,1-TCA, or less than 150 gallons per year on the average. A similar rate of use is expected for the period from 1978 to 1984. The amount of Viking Safe-Solv (used only in 1988) was less than 275 gallons.

The plant records and the employee interviews indicated that no spills from the parts washers occurred during operations with one exception. Reportedly, during a filling operation a valve was found to leak. Less than one gallon drained onto the concrete floor and was quickly contained and removed for disposal. No other spills are known to Ecolab for the vapor degreaser or the parts washers, or during raw product and waste solvent handling.

2.6.2 Wastewater and Water Supplies

Septic systems with leach fields exist at the Ecolab facility, but receive only domestic wastewater. Cooling and rinsate water had been discharged to an impoundment in the past. This impoundment was an old borrow pit which was dry under normal conditions. The waters discharged to the leach fields and to the impoundment did not receive any materials associated with the vapor degreaser or parts cleaners. The rinsate waters were associated with processes containing only inorganic chemicals and the leach fields were not used for any purpose other than non-process/domestic wastewater. Consequently, neither of these sewer systems could have been a pathway for solvents used in the facility. This statement is supported by soil, water and soil gas samples collected on the Ecolab property and described in Section 2.6.4.

The Ecolab facility had used two production wells on the property for water supplies within the main manufacturing area until 1995. A third well is located near the storage garage. The two production wells used for the facility were 150 and 125 feet deep. The third well is expected to be of similar depth as the production wells. Annual pumping rates for these two wells combined was on average less than 6,000 gallons per day or approximately 4 gpm. The two production wells were sampled in the 1980s and TCE, PCE, 1,1,1-TCA and other solvents were not detected in the well water. The two production wells were closed and properly abandoned in 1995. The third well was sampled in November 1996 and did not detect VOCs (refer to Table 4).

2.6.3 Groundwater Quality on the Ecolab Property

The concentrations of VOCs measured in groundwater samples collected from IEPA monitoring wells on the Ecolab property (G102s, G102d, G103s, G103d, and G111) have indicated PCE, when detected, at concentrations as high as 17 ppb. The 1995 sampling event by the IEPA reported PCE to be present at a concentration of 43 ppb, but this was an estimated value. 1,1,1-TCA has been detected at concentrations lower than 16 ppb and 1,1-DCA has been detected in past IEPA samples at a concentration

of 4.4 ppb. A recent sampling event performed in December 1996 provides new information on these monitoring wells and is discussed further in Section 3.0.

In June 1992, Lockheed Engineering conducted a soil gas survey on the Ecolab property for the USEPA/IEPA. No VOCs were detected in the two soil gas samples collected on the Ecolab property. One sample of soil gas and of grab groundwater were collected within the former rinsewater impoundment. No organic vapor analyzer (OVA) readings occurred at this location. According to the Lockheed Engineering soil gas report (June 1992) the grab water sample did not contain detectable VOCs.

2.6.4 Summary

In summary, the low volume of solvents used, the proper chemical handling procedures by Ecolab, off-site disposal practices, and the results of soil and groundwater analyses on the Ecolab property all indicate that the facility is not a source of TCE or other VOC contamination at the private wells in the Evergreen Manor Subdivisions.

The post-1975 timing of parts cleaning at Ecolab further indicates that the facility did not contribute to groundwater contamination at private wells in the Evergreen Manor Site. The history of chlorinated solvent use at the Ecolab facility does not allow for sufficient travel time for groundwater to move from the facility to the Evergreen Manor private wells. Reportedly, the use of the vapor degreaser did not occur until sometime during 1975 to 1978 at the Ecolab facility. The first discovery of chlorinated solvents in private wells in the Evergreen Manor Subdivision was in 1990. This allows only 12 to 15 years for groundwater to move the approximately two mile distance from the Ecolab facility to the north end of the Evergreen Manor Subdivision. This would equate to a groundwater flow rate of over 800 feet per year, which is unrealistic and much greater than the average rate calculated by Wehrmann (1984) of 365 feet per year. Consequently, not only would it be impossible for groundwater to flow this distance in such a short period of time, but also any potentially released chlorinated solvents would

also need to travel vertically through the 40 feet of unsaturated soils before entering the groundwater system.

CRA initiated additional field investigations at the Ecolab facility and at nearby properties to further evaluate Ecolab's potential as a source of groundwater contamination in the private wells at the Evergreen Manor Subdivisions. These additional investigations are described in the next section.

3.0 RECENT INVESTIGATIONS AT THE ECOLAB FACILITY

This section outlines the methods and results of recent studies performed by CRA at the Ecolab facility. The purpose of these investigations was to collect data to assess whether the Ecolab property was potentially contributing VOCs to the plume of contaminated groundwater located approximately two miles to the southwest in the Evergreen Manor Subdivision.

3.1 FIELD ACTIVITIES

Field activities were conducted from November 19, 1996 through November 21, 1996 and from December 2, 1996 through December 4, 1996. Boart Longyear of Schofield, Wisconsin was retained by CRA to perform drilling activities. Two piezometers and three monitoring wells were installed at the locations shown on Figures 1 and 4.

3.1.1 Groundwater Elevation Survey

Depth to groundwater was obtained at the two newly installed piezometers and five existing monitoring wells on November 20, 1996. Water levels were measured in each piezometer using a decontaminated electronic water level tape. Table 1 presents these elevations.

3.1.2 Decontamination Procedures

Drilling and sampling equipment was decontaminated prior to use and after each sample was collected to prevent cross-contamination between samples. Drilling equipment was decontaminated using a low volume high pressure hot water wash. Sampling equipment was decontaminated by washing with potable water and Alconox™ detergent and by rinsing with potable water.

3.1.3 Soil Boring Advancement

Five boreholes were advanced using 4 1/4-inch inside diameter (ID) hollow stem augers (HSA). Soil samples for stratigraphic characterization were collected at five foot intervals using a split spoon sampler. Soils were described according to the United Soil Classification System (USCS). A representative sample was obtained from the opened split spoon, placed in a clean glass jar for head space analysis and screened using a photoionization detector (PID) to analyze the presence of organic vapors. Soil cuttings were disposed of on-Site.

3.1.4 Piezometer Installation

Two piezometers (P-1 and P-2) were installed at the Site. Upon completion of a borehole, a piezometer was constructed within the augers as they were withdrawn from the borehole. Piezometers consisted of five-foot long lengths of 10-slot (0.010 inch) machine slotted schedule 40 polyvinyl chloride (PVC). Riser material consisted of flush threaded schedule 40 PVC pipe. Piezometers were completed with above-grade protective stand pipes. Stratigraphic and Instrumentation Logs are presented in Appendix B.

3.1.5 Monitoring Well Installation

Three monitoring wells (MW-1, MW-2 and MW-3) were installed at the Site. Upon completion of a borehole, a monitoring well was constructed within the augers as they were withdrawn from the borehole. Monitoring wells consisted of five-foot long lengths of 10-slot machine slotted stainless steel. Riser material consisted of flush-threaded stainless steel. Monitoring wells were completed with flush-mount protectors. Stratigraphic and Instrumentation Logs are presented in Appendix B.

3.1.6 Piezometer and Monitoring Well Development

Water levels were measured in each piezometer or well prior to development using a decontaminated electronic water level tape. The piezometers and wells were developed using an electronic submersible pump.

Measurements of pH, conductivity and temperature were made periodically during development and visual observations of turbidity and color were noted. Development continued until a minimum of 15 well volumes had been removed. Development water was discharged to the ground. Table 2 presents piezometer and monitoring well development parameters.

3.1.7 Monitoring Well Sampling and Analysis

Groundwater samples for VOC analysis were collected from the three newly installed monitoring wells and from four existing IEPA monitoring wells using disposable polyethylene bailers. The newly installed monitoring wells were sampled immediately after well development. The existing wells were sampled after a minimum of three well volumes of water had been purged from the wells and the parameters had stabilized. Table 3 presents monitoring well purging parameters.

A duplicate sample was collected from one of the wells for quality control/quality assurance (QA/QC). Samples were shipped on ice under chain of custody documentation to Accutest Laboratories of Dayton, New Jersey. Split samples were collected by the IEPA during the December 1996 sampling event. The results of IEPA sample analyses (performed by a separate laboratory) for monitoring wells G102S, G103s and G111 on the Ecolab property, and for G114 on Rockton Road were in agreement with those presented in this report.

3.1.8 Storage Garage Well Sampling

Water is supplied to the storage garage located east of the main Ecolab building by a production well. CRA sampled the well on November 21, 1996. Prior to sampling, the well was purged by running the water for 15 minutes. A sample and a duplicate sample were collected and analyzed for VOCs. Samples were shipped on ice under chain of custody documentation to NET, Inc. of Bartlett, Illinois for analysis.

3.1.9 Surveying

Willett, Hofmann and Associates, Inc. of Rockford, Illinois was contracted to provide surveying services. Vertical and horizontal controls for the newly installed piezometers and for five existing monitoring wells were established.

3.2 GROUNDWATER FLOW DATA

Based on groundwater elevations obtained on November 20, 1996, groundwater flow is to the southwest. Figure 4 presents groundwater contours and flow direction in the area of the Site. Figure 3 presents groundwater flow direction as related to the larger area.

The groundwater level data collected by CRA in November and December 1996 indicate a westerly component to groundwater flow in the upper sands and gravels near Ecolab. This westerly component is likely a result of the proximity of the Rock River to the west and the influence of a paleo-channel or bedrock valley located along the present surface water drainage of Dry Creek. The westerly component of groundwater flow is similar to that mapped by Wehrmann in his 1983 studies.

The net flux of groundwater beneath the Ecolab property is to the southwest. This groundwater flow is defined by a stream line which would be defined as a line from the center of the Ecolab building to the

intersection of Dry Creek and CR 8 (Hononegah Road). Groundwater stream lines originating on west, central and east portions of the Ecolab property are depicted on Figure 3. The east and west stream lines bracket the groundwater flowing under the Ecolab facility. These stream lines, if projected to the Evergreen Manor Site, pass to the west of the Tresemer Subdivision. Private wells in this Tresemer Subdivision area of the Evergreen Manor Site have not been impacted by VOCs. Figure 3 also presents the outline of the plume as defined by the IEPA in the 1992 Screening Site Inspection Report.

Some seasonal variation is expected in water levels and flow directions. Based upon groundwater monitoring data presented by Wehrmann in 1983 and 1984 and by the IEPA in 1994 and 1995 and based upon recent data collected by CRA, these flow variations are minimal in the area of the Ecolab facility.

3.3 GROUNDWATER QUALITY DATA

Table 4 presents a summary of groundwater quality data collected at monitoring wells located on the Ecolab property or on nearby properties. This table presents the results of recent groundwater sampling in December 1996 at IEPA monitoring wells G102s, 103s, 111, 114, and three new monitoring wells installed by CRA (MW-1, 2, 3) on the north side of the Ecolab property. Appendix C presents the chain-of-custody and certificates of analyses for the recent CRA samples. The only chlorinated VOCs detected in the eight monitoring wells were found in one well, G103s (1,1,1-TCA at 1.5 ppb and PCE at 8.4 ppb), located along the railroad tracks on the west side of Ecolab property. Figure 5 summarizes the sampling results for these eight monitoring wells (including the December 1996 data) and other nearby monitoring wells.

The information presented in Table 4 indicates that concentrations of PCE, 1,1,1-TCA and 1,1-DCA which had been observed in 1994 and 1995 in the IEPA monitoring wells have decreased to non-detect values with the exception of G103s. The lack of any higher concentrations of the VOCs suggests that any source activity or on-going release mechanism is

non-existent on the Ecolab facility. The detection of low concentrations of PCE and 1,1,1-TCA in G103s may be related to potential sources north of Rockton Road. Further, concentrations of PCE in G103s have decreased with time.

Consistent with past sample events, the new groundwater quality data from the December 1996 sampling event did not detect any concentrations of TCE on the Ecolab property. TCE and its degradation products have been detected in groundwater samples from monitoring wells located southwest of the AAA Disposal/WMI facility and, again, TCE is the predominant contaminant in the private wells at the Evergreen Manor Site.

3.4 SUMMARY OF RECENT INVESTIGATIONS

Groundwater level measurements made in late November 1996 and groundwater sampling completed in early December 1996 have determined the following:

- groundwater flow underneath and near the Ecolab property is to the southwest;
- groundwater stream lines which bracket the Ecolab property generally pass through the west northwest portion of the Evergreen Manor Site in areas which have not been contaminated by VOCs;
- sampling and analysis of groundwater from monitoring wells on the Ecolab property, including locations north and south of the manufacturing building, have not detected chlorinated solvents, with the exception of IEPA monitoring well G103s along the railroad tracks; and
- the low concentrations of PCE and 1,1,1-TCA detected in G103s in December 1996 are from a source upgradient of Ecolab.

4.0 CONCLUSIONS

CRA's review of existing FOIA file information, 104(e) responses, and Ecolab personnel interviews, along with the collection of groundwater level and quality data in November and December 1996, indicates that Ecolab has not contributed to the TCE and other VOC contamination of private wells located in the Evergreen Manor Site. Several factors support this conclusion.

First, groundwater sample analyses from private and monitoring wells in the Evergreen Manor Site area indicate a spatial distribution of VOCs that is not consistent with a source at the Ecolab property. The primary VOC found in the private wells is TCE, yet, TCE has not been detected on Ecolab property. TCE is the only VOC above MCLs and IEPA's 35 IAC 620 groundwater quality standards. Moreover, Ecolab has never used TCE. In addition, the center of the TCE plume in the Evergreen Manor subdivision does not align with groundwater originating on the Ecolab property (Figure 3) based on recently determined groundwater flow directions. Groundwater sampling results from monitoring wells located southwest of the AAA Disposal/WMI property indicate TCE and its degradation products at depths greater than 40 feet below grade. On the Ecolab property, however, low level groundwater impacts are shallow and do not include TCE.

Second, available records document the presence of potentially significant sources of TCE, PCE and 1,1,1-TCA upgradient and downgradient of Ecolab. Several of these facilities have documented the presence of chlorinated solvents in soils and subsurface soils on their property. FOIA file information, 104(e) responses and ERIIS Database Searches have indicated that Regal-Beloit, AAA Disposal/WMI, and Warner Electric are viable sources of TCE and 1,1,1-TCA detected in groundwater at the Evergreen Manor Site. In addition, the Makerite Manufacturing facility, Electro Cam, the former Beloit foundry landfill and Regal-Beloit, located north of Ecolab, could be contributing to groundwater contamination in the vicinity of Rockton Road and Highway 251.

Third, groundwater originating on the Ecolab property does not flow to the impacted private wells in Evergreen Manor. A westerly component of groundwater flow exists at and near the Ecolab property and this results in groundwater flow directions aligned with areas west of Evergreen Manor. According to the IEPA data reviewed to date, private wells in these westerly subdivisions have not been impacted by VOC contamination.

Finally, property use history and groundwater travel time further supports the conclusion that Ecolab has not contributed to VOC contamination at the Evergreen Manor Site. An average groundwater flow of over 800 feet per year would be required to move groundwater underneath the Ecolab facility in 1975 to 1978 to the Evergreen Manor Subdivision by 1990, and this velocity is inconsistent with regional and local hydrogeologic conditions. Because Ecolab did not start using 1,1,1-TCA and PCE solvents until sometime between 1975 to 1978, there can be no earlier source of release mechanism at the facility prior to these dates. Consequently, operations at Ecolab could not have contributed to the groundwater contamination discovered in 1990 in the Evergreen Manor Subdivision or nearby subdivisions.

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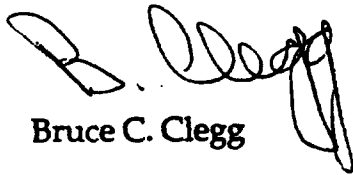
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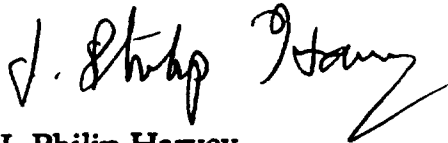
All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

A handwritten signature in cursive script, appearing to read 'R. G. Shepherd'.

Richard G. Shepherd, P. Eng.

A handwritten signature in cursive script, appearing to read 'B. C. Clegg'.

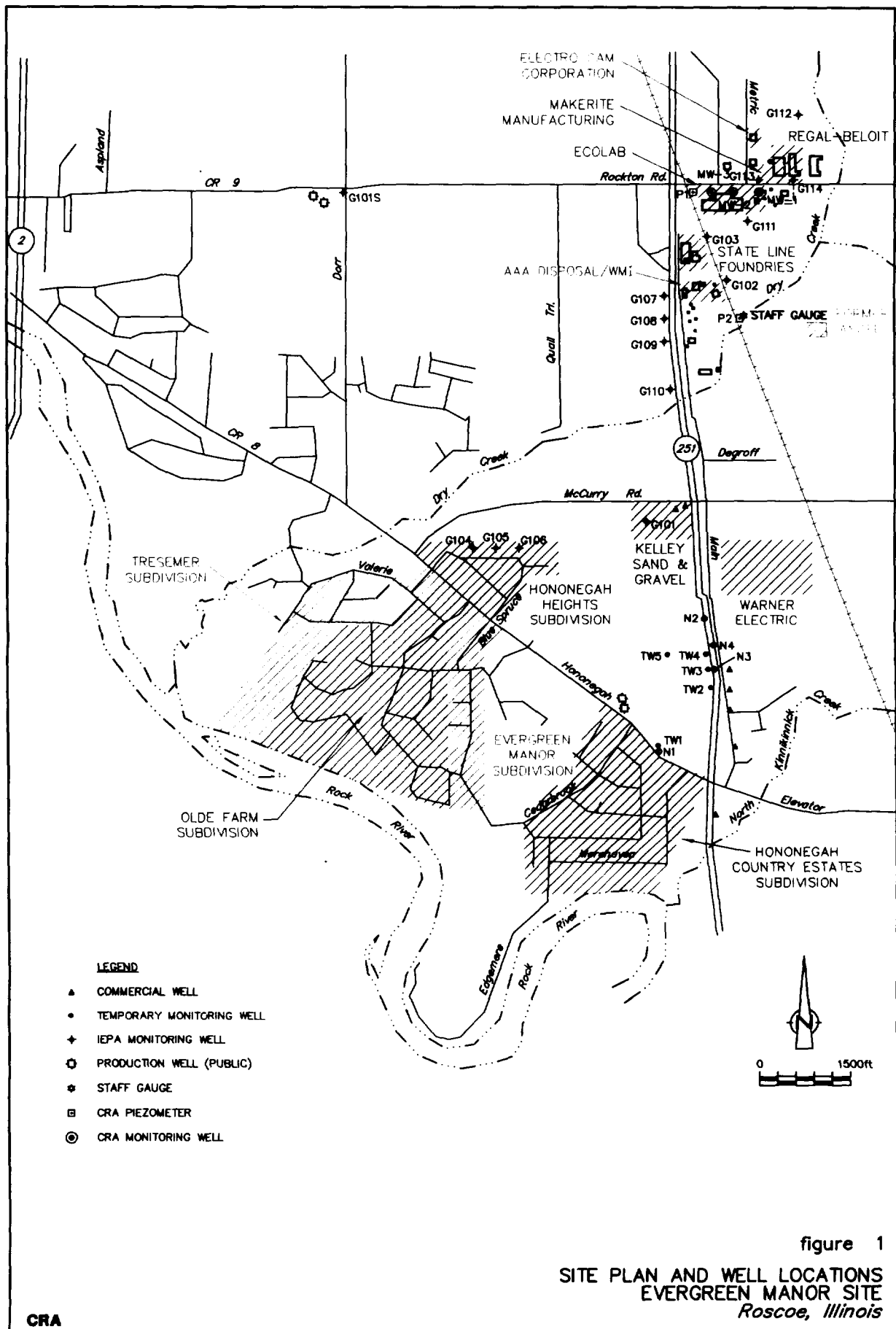
Bruce C. Clegg

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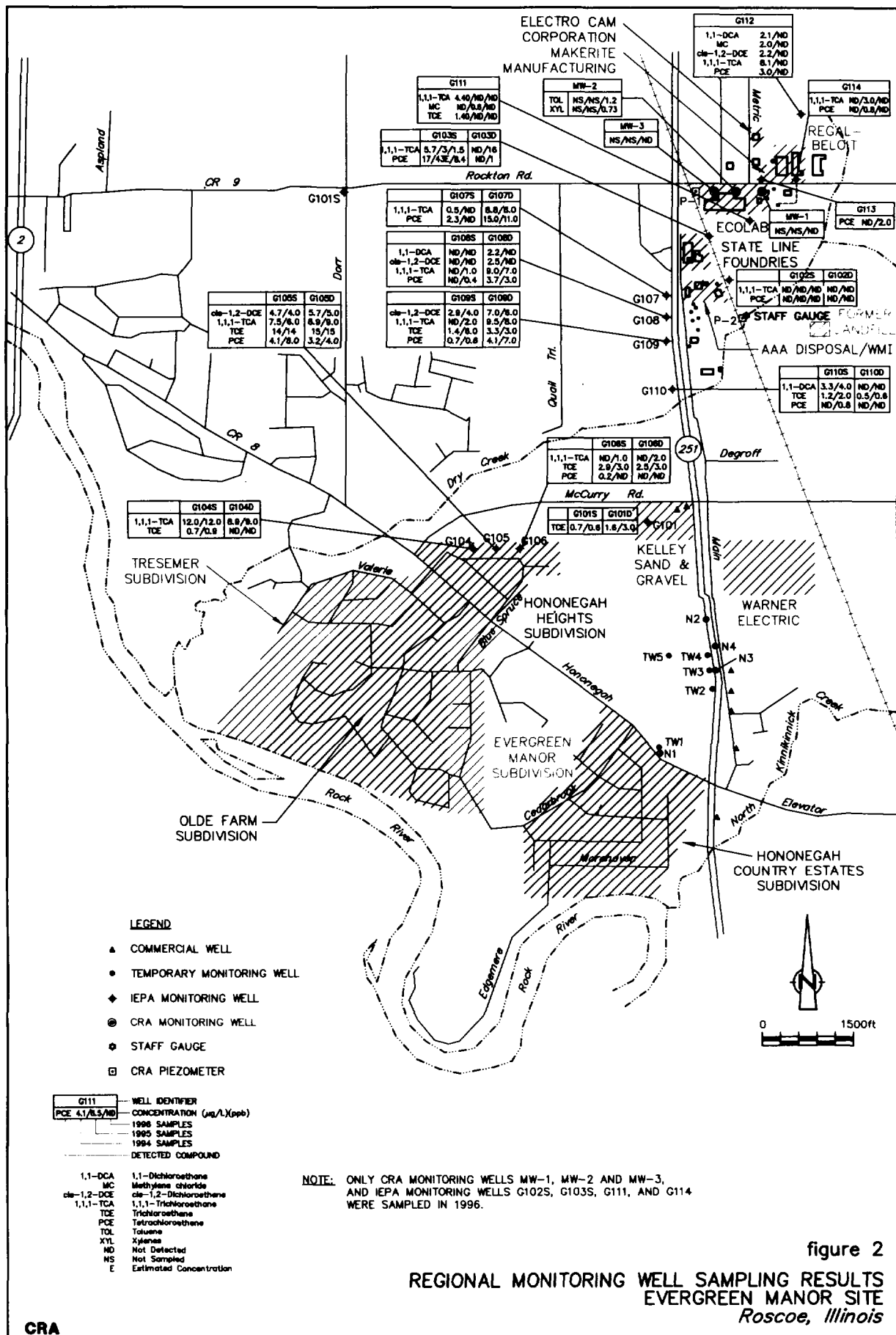
J. Philip Harvey

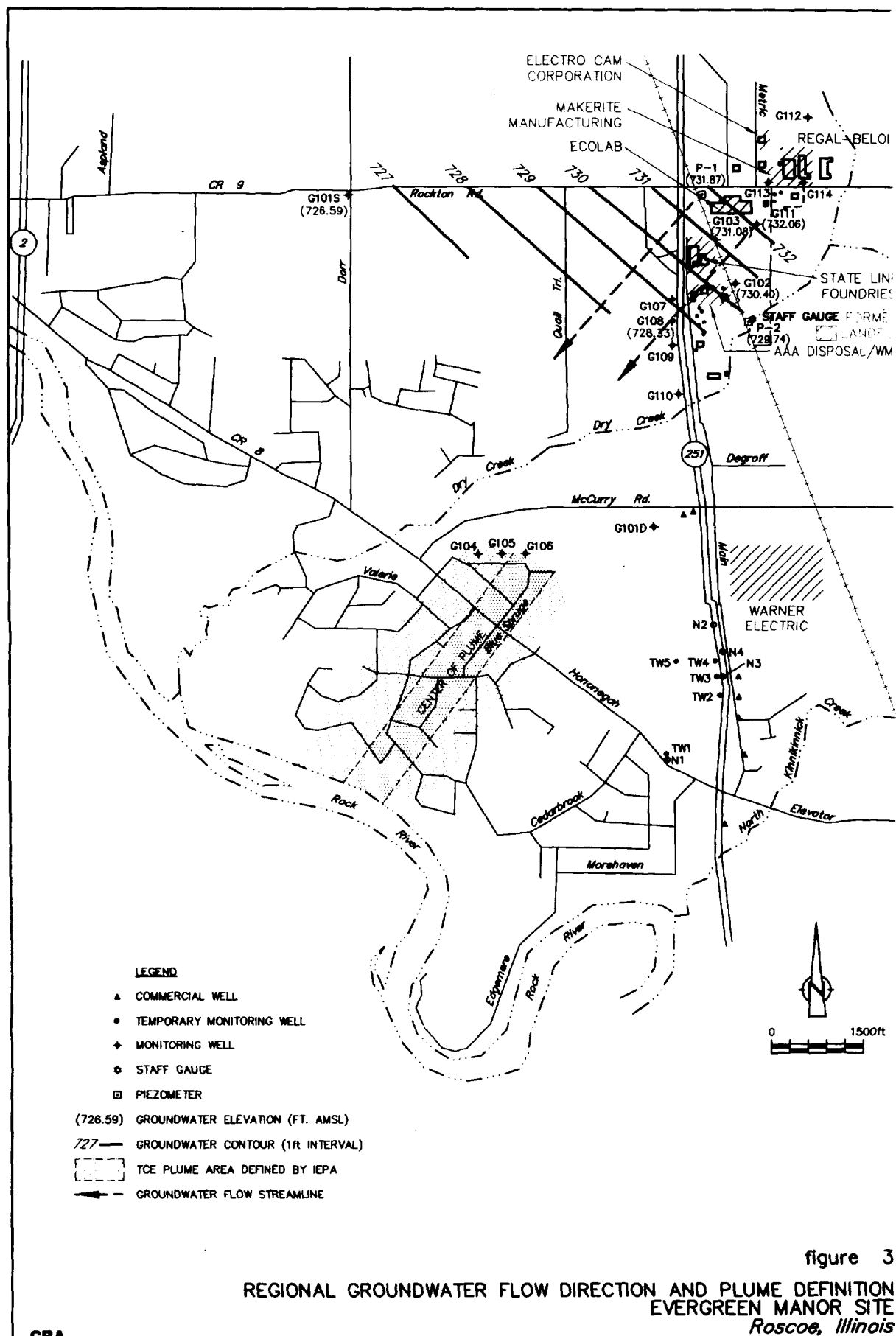
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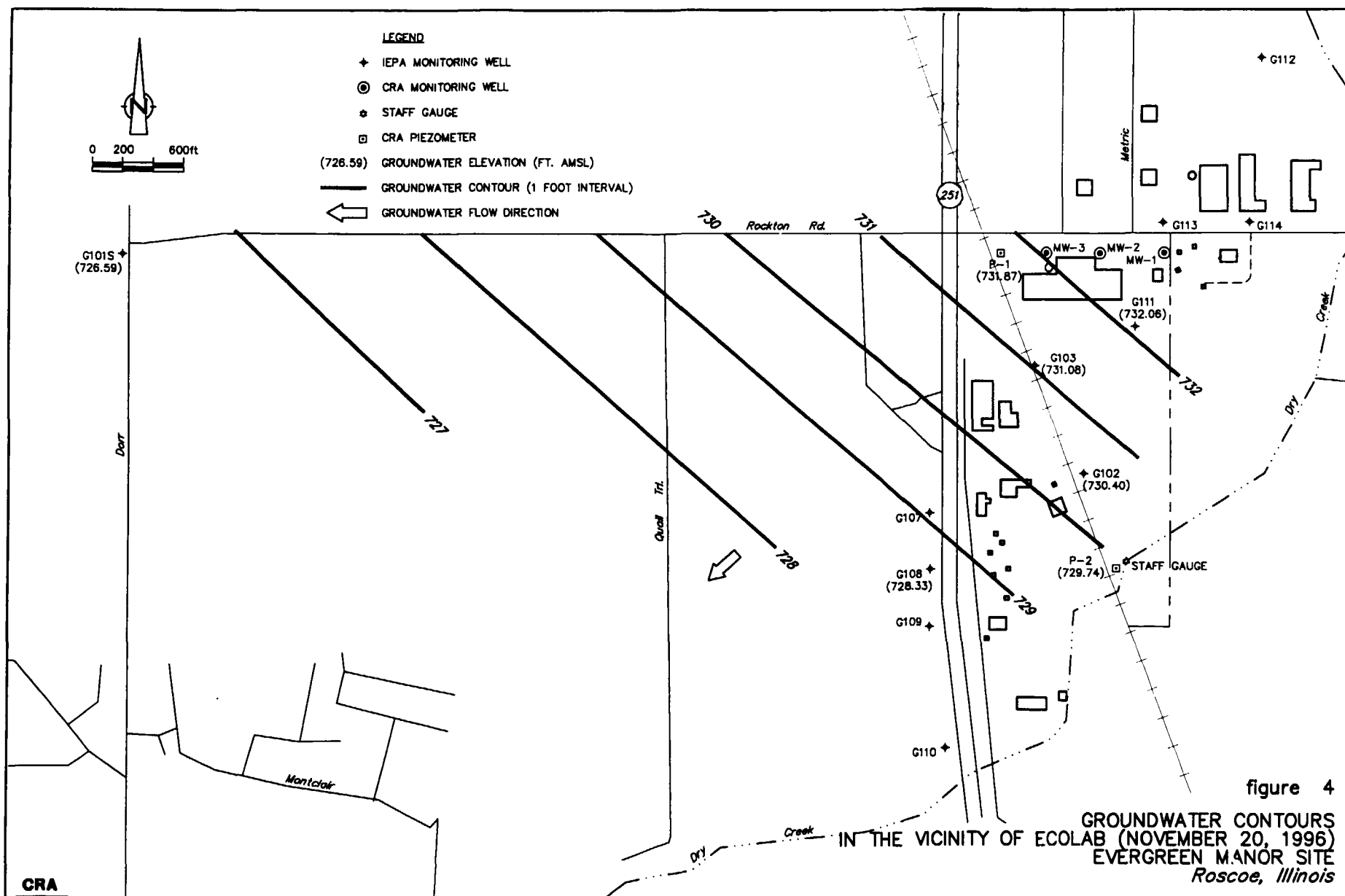


figure 4

GROUNDWATER CONTOURS
IN THE VICINITY OF ECOLAB (NOVEMBER 20, 1996)
EVERGREEN MANOR SITE
Roscoe, Illinois

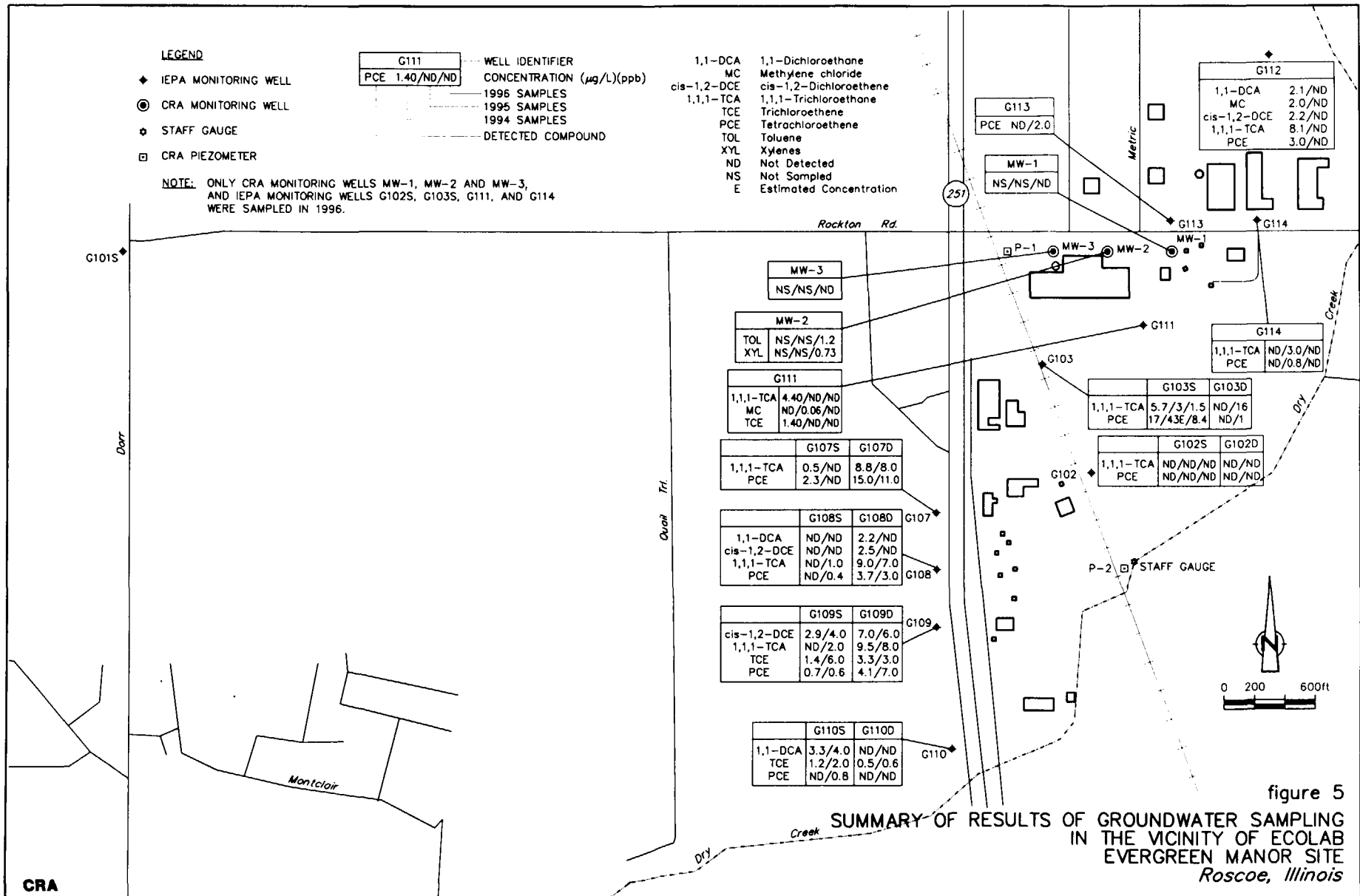


figure 5
SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
IN THE VICINITY OF ECOLAB
EVERGREEN MANOR SITE
Roscoe, Illinois

TABLES

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TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS
 NOVEMBER 20, 1996
 EVERGREEN MANOR SITE
 ROSCOE, ILLINOIS

<i>Well Number</i>	<i>Top of Casing Reference Elevation (ft AMSL) ¹</i>	<i>11/20/96</i>	
		<i>Depth to Water (ft BTOC) ²</i>	<i>Groundwater Elevation (ft AMSL)</i>
P-1	772.95	41.08	731.87
P-2	749.81	20.07	729.74
G102s	771.08	40.68	730.40
G103s	767.16	36.08	731.08
G108s	766.93	38.60	728.33
G111	770.65	38.59	732.06
FG101s	768.19	41.60	726.59

¹ ft AMSL - feet above mean sea level

² ft BTOC - feet below top of casing

TABLE 2
SUMMARY OF PIEZOMETER AND MONITORING WELL DEVELOPMENT PARAMETERS
EVERGREEN MANOR SITE
ROSCOE, ILLINOIS

<i>Piezometer/ Well Number</i>	<i>Date Conducted</i>	<i>Water Level (ft BTOC) ¹</i>	<i>Well Volume (gallons)</i>	<i>Volume Removed (gallons)</i>	<i>pH (Standard Units)</i>	<i>Conductivity (μS/cm) ²</i>	<i>Temperature (°C)</i>	<i>Appearance</i>	<i>Development Method</i>
P-1	11/20/96	41.08	1.00	4	7.82	880	11.2	Brown, cloudy	Pump
				8	7.68	798	8.7	Brown, cloudy	
				12	7.58	859	8.5	Brown, cloudy	
				15	7.59	828	8.6	Very slightly cldy	
				20	7.362	826	8.3	Brown, cloudy	
				24	7.63	855	9.2	Very slightly cldy	
P-2	11/19/96	20.05	1.06	4	7.44	758	9.0	Brown, cloudy	Pump
				7	7.28	728	9.0	Brown, cloudy	
				10	7.22	703	8.7	Brown, cloudy	
				15	7.21	716	8.6	Very slightly cldy	
				20	7.20	701	8.1	Brown, cloudy	
				24	7.24	706	8.2	Clear	
MW-1	12/3/96	37.45	0.93	1	7.42	594	8.8	Brown, cloudy	Pump
				3	7.56	559	9.0	Brown, cloudy	
				5	7.49	572	9.3	Brown, cloudy	
				8	7.50	542	9.0	Brown, cloudy	
				10	7.54	561	9.1	Lt brn, slightly cldy	
				12	7.53	562	9.1	Very slightly cldy	
				14	7.53	569	9.2	Clear	
				16	7.53	566	9.1	Clear	
MW-2	12/3/96	39.82	0.79	2	7.12	1,081	6.6	Brown, cloudy	Pump
				4	7.18	1,103	6.7	Brown, cloudy	
				6	7.28	1,103	7.3	Brown, cloudy	
				8	7.26	1,096	8.0	Lt brn, slightly cldy	
				10	7.27	1,101	8.2	Very slightly cldy	

TABLE 2
SUMMARY OF PIEZOMETER AND MONITORING WELL DEVELOPMENT PARAMETERS
EVERGREEN MANOR SITE
ROSCOE, ILLINOIS

<i>Piezometer/ Well Number</i>	<i>Date Conducted</i>	<i>Water Level (ft BTOC) ¹</i>	<i>Well Volume (gallons)</i>	<i>Volume Removed (gallons)</i>	<i>pH (Standard Units)</i>	<i>Conductivity (μS/cm) ²</i>	<i>Temperature (°C)</i>	<i>Appearance</i>	<i>Development Method</i>
MW-2	12/3/96	39.82	0.79	12	7.27	1,091	8.2	Very slightly cldy	
				14	7.28	1,096	8.4	Clear	
				16	7.29	1,084	8.5	Clear	
MW-3	12/3/96	39.63	0.86	2	6.54	618	7.9	Brown, cloudy	Pump
				4	7.02	775	8.2	Brown, cloudy	
				6	7.07	831	8.6	Brown, cloudy	
				8	7.18	836	8.7	Lt brn, slightly cldy	
				10	7.21	820	8.8	Lt brn, slightly cldy	
				12	7.22	811	8.9	Very slightly cldy	
				14	7.26	814	8.9	Clear	
				16	7.25	820	9.1	Clear	

¹ ft BTOC - feet below top of casing

² μ S/cm - microsiemens per centimeter

TABLE 3
SUMMARY OF MONITORING WELL PURGING PARAMETERS
EVERGREEN MANOR SITE
ROSCOE, ILLINOIS

<i>Well Number</i>	<i>Date Conducted</i>	<i>Water Level (ft BTOC) ¹</i>	<i>Well Volume (gallons)</i>	<i>Volume Removed (gallons)</i>	<i>pH (standard units)</i>	<i>Conductivity (μS/cm) ²</i>	<i>Temperature (°C)</i>	<i>Appearance</i>	<i>Purge Method</i>
G102s	12/04/96	40.92	1.11	1.25	7.35	478	8.6	Very slightly cloudy	Bailed
				2.50	7.38	473	8.6	Slightly cloudy	
				3.75	7.40	474	8.9	Slightly cloudy	
G103s	12/04/96	36.33	1.44	1.5	7.14	615	9.8	Clear	Bailed
				3.0	7.15	628	9.8	Clear	
				4.5	7.17	630	10.0	Clear	
G111	12/04/96	38.83	1.93	2.0	7.24	465	11.2	Brown, cloudy	Bailed
				4.0	7.27	477	11.3	Brown, cloudy	
				6.0	7.31	482	11.3	Brown, cloudy	
G114	12/04/96	38.70	2.37	2.5	7.26	638	10.3	Brown, cloudy	Bailed
				5.0	7.21	735	10.1	Brown, cloudy	
				7.5	7.23	745	10.0	Lt brown, slightly cloudy	
				10.0	7.21	749	10.2	Lt brown, slightly cloudy	

1 ft BTOC - feet below top of casing

2 μS/cm - microsiemens per centimeter

TABLE 4

SUMMARY OF DETECTED ANALYTICAL DATA
FOR ECOLAB AREA MONITORING WELLS
EVERGREEN MANOR SITE
ROSCOE, ILLINOIS

Well Location Date Sampled	Concentration ($\mu\text{g/L}$) ¹								
	G102s			G103s			G111		
	3/94	2/95	12/96	3/94	2/95	12/96	3/94	2/95	12/96
<i>Analytes</i>									
1,1-Dichloroethene	ND ²	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	0.60	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	5.7	3.0	1.5	4.4	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	1.4	ND	ND
Tetrachloroethene	ND	ND	ND	17.0	43.E ³	8.4	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4

SUMMARY OF DETECTED ANALYTICAL DATA
FOR ECOLAB AREA MONITORING WELLS
EVERGREEN MANOR SITE
ROSCOE, ILLINOIS

Well Location Date Sampled	Concentration (µg/L)						Garage Well
	G114 3/94	G114 2/95	12/96	MW-1 12/96	MW-2 12/96	MW-3 12/96	
Analytes							
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	3.0	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	0.8	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	1.20	ND	ND
Xylenes	ND	ND	ND	ND	0.73	ND	ND

¹ µg/L = micrograms per liter (parts per billion, ppb)

² ND - Not detected

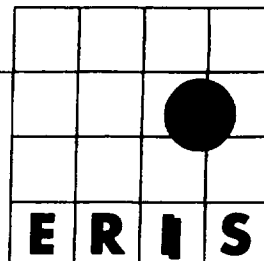
³ E - Estimated quantity

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APPENDIX A

ERIIS DATABASE SEARCH



PERTAINING TO:
HIGHWAY 251 AND ROCKTON ROAD
SOUTH BELOIT, IL 61080

REPORT NUMBER:
134112A

PREPARED ON:
12/19/1996

ON BEHALF OF:
Conestoga-Rovers & Associates
8615 W. Bryn Mawr Avenue
Chicago, IL 60631

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The detailed federal and state database information indicates potential and actual environmental threats within the study radius. These records are sorted by their distance from the study site.

Digital Custom Map

The digital custom map is cross referenced with the database records. The cross-in-circle in the center of the map represents the study site. The red circles represent distances from the study site. The plottable sites in the report are distinguished on the map by symbols of different shape and color.

Historic Fire Insurance Maps

The ERIIS collection of historical Sanborn Fire Insurance Maps covers 14,000 cities and towns. These maps may indicate prior use of the study site. If no maps are available for the study site, a notice to that effect is included. This notice should serve as evidence of due diligence.

Topographical Map

USGS topographical maps show natural and man-made features as well as the shape and elevation of the terrain. The 7.5 minute quad maps are produced at a scale of 1:24,000, or one inch represents 2,000 feet.

If you have any questions about this report,
please contact ERIIS Customer Service at 1-800-989-0403



505 Huntmar Park Dr, Suite 200
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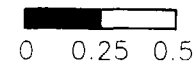
SITE INFORMATION

Highway 251 And Rockton Rd
South Beloit, IL
Winnebago County
Job Number: 134112A
Map Plotted: Dec 18, 1996

MAP LEGEND

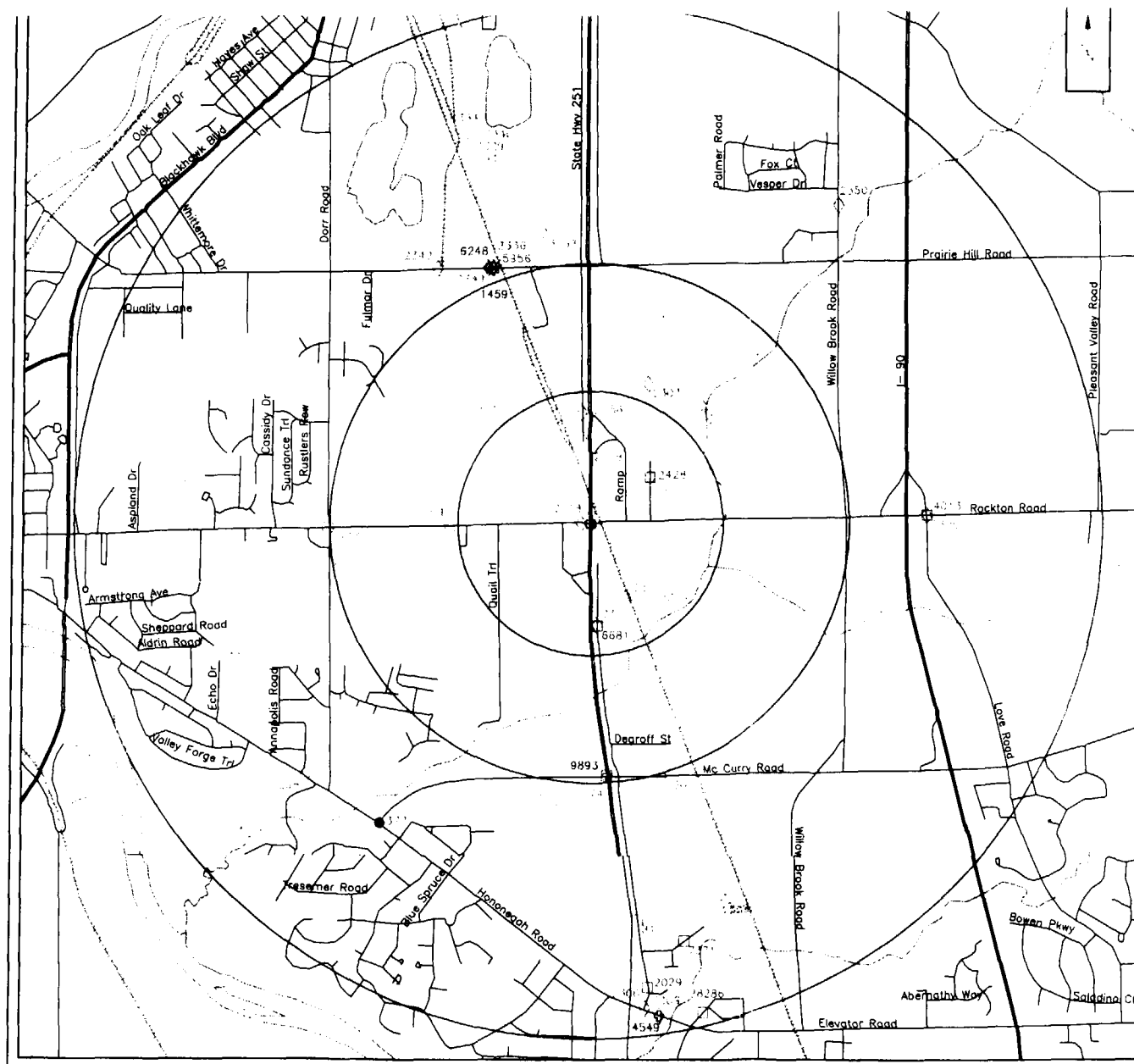
- Property Area
- Radii .5, 1, 2 Mi
- Hydrography
- Railroads
- Roads
- Highways
- ★ NPL 0 Sites
- RCRIS_TS 1 Site
- CERCLIS 1 Site
- NFRAP 1 Site
- RCRIS_LG 3 Sites
- RCRIS_SG 7 Sites
- TRI 1 Site
- ERNS_ALL 0 Sites
- ERNS94 0 Sites
- ERNS92 0 Sites
- ERNS93 0 Sites
- ERNS 0 Sites
- HWS 0 Sites
- ✦ LRST 4 Sites
- SWF 15 Sites
- RST 15 Sites

Miles



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EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

D001 -- A solid waste that exhibits the characteristic of ignitability, but is not listed as a hazardous waste in Subpart D.

D002 -- A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in Subpart D.

D003 -- A solid waste that exhibits the characteristic of reactivity, but is not listed as a hazardous waste in Subpart D.

<u>EPA HW #</u>	<u>CAS #</u>	<u>COMMON CHEMICAL NAME</u>
D004	7740-38-2	ARSENIC
D005	7740-39-3	BARIUM
D006	7440-43-9	CADMIUM
D007	7440-47-3	CHROMIUM
D008	7439-92-1	LEAD
D009	7439-97-6	MERCURY
D010	7782-49-2	SELENIUM
D011	7440-22-4	SILVER
D012	72-20-8	ENDRIN
D013	58-89-9	LINDANE
D014	72-43-5	METHOXYCHLOR
D015	8001-35-2	TOXAPHENE
D016	94-75-7	2,4-D
D017	93-72-1	2,4,5-TP(SILVEX)
D018	71-39-2	BENZENE
D019	56-23-5	CARBON TETRACHLORIDE
D020	57-74-9	CHLORDANE
D021	108-90-7	CHLOROBENZENE
D022	67-66-3	CHLOROFORM
D023	95-48-7	O-CRESOL
D024	108-39-4	M-CRESOL
D025	106-44-5	P-CRESOL
D026		CRESOL
D027	106-46-7	1,4-DICHLOROBENZENE
D028	107-06-2	1,2-DICHLOROETHANE
D029	75-35-4	1,1-DICHLOROETHYLENE
D030	121-14-2	2,4-DINITROTOLUENE
D031	76-44-8	HEPTACHLOR (AND ITS EPOXIDE)
D032	118-74-1	HEXACHLOROBENZENE
D033	87-68-3	HEXACHLOROBUTADIENE
D034	67-72-1	HEXACHLOROETHANE
D035	78-93-3	METHYL ETHYL KETONE
D036	98-95-3	NITROBENZENE
D037	87-86-5	PENTACHLOROPHENOL
D038	110-86-1	PYRIDINE
D039	127-18-4	TETRACHLOROETHYLENE
D040	79-01-6	TRICHLOROETHYLENE
D041	95-95-4	2,4,5-TRICHLOROPHENOL
D042	88-06-2	2,4,6-TRICHLOROPHENOL
D043	75-01-4	VINYL CHLORIDE

EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

F001 -- The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

F002 -- The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

F003 -- The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

F004 -- The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

F005 -- The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

F006 -- Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.

F007 -- Spent cyanide plating bath solutions from electroplating operations.

F008 -- Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.

EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

F009 -- Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.

F010 -- Quenching bath residue from oil baths from metal heat treating operations where cyanides are used in the process.

F011 -- Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.

F012 -- Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.

F019 -- Wastewater treatment sludges from the chemical conversion coating of aluminum.

F020 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)

F021 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.

F022 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.

F023 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5- trichlorophenol.)

F024 -- Wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent dessicants, wastewater, wastewater treatment sludges, spend catalysts, and wastes listed in §261.32.)

F026 -- Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.

F027 -- Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)

EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

F028 -- Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.

K001 -- Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.

K002 -- Wastewater treatment sludge from the production of chrome yellow and orange pigments.

K003 -- Wastewater treatment sludge from the production of molybdate orange pigments.

K004 -- Wastewater treatment sludge from the production of zinc yellow pigments.

K005 -- Wastewater treatment sludge from the production of chrome green pigments.

K006 -- Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).

K007 -- Wastewater treatment sludge from the production of iron blue pigments.

K008 -- Oven residue from the production of chrome oxide green pigments.

K009 -- Distillation bottoms from the production of acetaldehyde from ethylene.

K010 -- Distillation side cuts from the production of acetaldehyde from ethylene.

K011 -- Bottom stream from the wastewater stripper in the production of acrylonitrile.

K013 -- Bottom stream from the acetonitrile column in the production of acrylonitrile.

K014 -- Bottoms from the acetonitrile purification column in the production of acrylonitrile.

K015 -- Still bottoms from the distillation of benzyl chloride.

K016 -- Heavy ends or distillation residues from the production of carbon tetrachloride.

K017 -- Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.

K018 -- Heavy ends from the fractionation column in ethyl chloride production.

K019 -- Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.

K020 -- Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.

K021 -- Aqueous spent antimony catalyst waste from fluoromethane production.

K022 -- Distillation bottom tars from the production of phenol/acetone from cumene.

K023 -- Distillation light ends from the production of phthalic anhydride from naphthalene.

EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

- K024 -- Distillation bottoms from the production of phthalic anhydride from naphthalene.
- K025 -- Distillation bottoms from the production of nitrobenzene by the nitration of benzene.
- K026 -- Stripping still tails from the production of methyl ethyl pyridines.
- K027 -- Centrifuge and distillation residues from toluene diisocyanate production.
- K028 -- Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.
- K029 -- Wastes from the product steam stripper in the production of 1,1,1-trichloroethane.
- K030 -- Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.
- K031 -- By-product salts generated in the production of MSMA and cacodylic acid.
- K032 -- Wastewater treatment sludge from the production of chlordane.
- K033 -- Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.
- K034 -- Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.
- K035 -- Wastewater treatment sludges generated in the production of creosote.
- K036 -- Still bottoms from toluene reclamation distillation in the production of disulfoton.
- K037 -- Wastewater treatment sludges from the production of disulfoton,
- K038 -- Wastewater from the washing and stripping of phorate production.
- K039 -- Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.
- K040 -- Wastewater treatment sludge from the production of phorate.
- K041 -- Wastewater treatment sludge from the production of toxaphene.
- K071 -- Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.
- K073 -- Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.
- K083 -- Distillation bottoms from aniline production.

EPA HAZARDOUS WASTE NUMBERS -- HAZARDOUS WASTE DESCRIPTION

- K085 -- Distillation or fractionation column bottoms from the production of chlorobenzenes.
- K093 -- Distillation light ends from the production of phthalic anhydride from ortho-xylene.
- K095 -- Distillation bottoms from the production of 1,1,1-trichloroethane.
- K096 -- Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.
- K097 -- Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.
- K098 -- Untreated process wastewater from the production of toxaphene.
- K103 -- Process residues from aniline extraction from the production of aniline.
- K104 -- Combined wastewater streams generated from nitrobenzene/aniline production,
- K105 -- Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.
- K106 - Wastewater treatment sludge from the mercury cell process in chlorine production.
- K111 - Product washwaters from the production of dinitrotoluene via nitration of toluene.
- K112 -- Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.
- K113 -- Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
- K114 -- Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
- K115 -- Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
- K116 -- Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.
- K117 -- Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.
- K118 -- Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.
- K136 -- Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
F027	88-06-2	2,4,6-TRICHLOROPHENOL
F027	58-90-2	2,3,4,6-TETRACHLOROPHENOL
F027	95-95-4	2,4,5-TRICHLOROPHENOL
F027	87-86-5	PENTACHLOROPHENOL
F027	93-76-5	2,4,5-TRICHLOROPHENOXYACETIC ACID
F027	93-72-1	SILVEX
P002	591-08-28	1-ACETYL-2-THIOUREA
P003	107-02-88	ACROLEIN
P001	81-81-2	WARFARIN
P004	309-00-28	ALDRIN
P005	107-18-68	ALLYL ALCOHOL
P006	20859-73-8	ALUMINUM PHOSPHIDE
P007	2763-96-4	MUSCIMOL
P008	504-24-58	PYRIDINE, 4-AMINO
P010	7778-39-4	ARSENIC ACID
P011	1303-28-2	ARSENIC PENTOXIDE, SOLID
P012	1327-53-3	ARSENIC TRIOXIDE, SOLID
P013	542-62-18	BARIUM CYANIDE, SOLID
P014	108-98-58	PHENYL MERCAPTAN
P015	7440-41-7	BERYLLIUM
P016	542-88-18	BIS(CHLOROMETHYL)ETHER
P017	598-31-28	BROMOACETONE
P018	357-57-38	BRUCINE
P020	88-85-7	DINOSEB
P021	592-01-88	CALCIUM CYANIDE, SOLID
P022	75-15-0	CARBON DISULFIDE
P023	107-20-08	CHLOROACETALDEHYDE
P024	106-47-88	P-CHLOROANILINE
P026	5344-82-1	1-(O-CHLOROPHENYL) THIOUREA
P027	542-76-78	3-CHLOROPROPIONITRILE
P028	100-44-78	BENZYL CHLORIDE
P029	544-92-38	CUPROUS CYANIDE
P030	57-12-5	CYANIDES (SOLUBLE SALTS AND COMPLEXES)
P031	460-19-58	CYANOGEN
P033	506-77-48	CYANOGEN CHLORIDE, INHIBITED
P034	131-89-58	4,6-DINITRO-O-CYCLOHEXYLPHENOL
P036	696-28-68	DICHLOROPHENYLARSINE
P037	60-57-1	DIELDRIN
P038	692-42-28	DIETHYLARSINE
P039	298-04-48	DISULFOTON
P040	297-97-28	THIONAZIN
P041	311-45-58	DIETHYL P-NITROPHENYL PHOSPHATE
P042	51-43-4	EPINEPHRINE
P043	55-91-4	ISOFLUROPHATE
P044	60-51-5	DIMETHOATE
P045	39196-18-4	THIOFANOX
P046	122-09-88	ALPHA, ALPHA-DIMETHYLPHENETHYLAMINE
P047	534-52-18	DINITRO-ORTHO-CRESOL

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
P048	51-28-5	2,4-DINITROPHENOL
P049	541-53-78	2,4-DITHIOBIURET
P050	115-29-78	ENDOSULFAN
P051	72-20-8	ENDRIN
P054	151-56-48	ETHYLENEIMINE
P056	7782-41-4	FLUORINE
P057	640-19-78	FLUORACETAMIDE
P058	62-74-8	SODIUM FLUOROACETATE
P059	76-44-8	HEPTACHLOR
P060	465-73-68	ISODRIN
P062	757-58-48	HEXAETHYL TETRAPHOSPHATE
P063	74-90-8	HYDROGEN CYANIDE, ANHYDROUS, STABILIZED
P064	624-83-98	METHYL ISOCYANATE
P065	628-86-48	MERCURY FULMINATE
P066	16752-77-5	METHOMYL
P067	75-55-8	PROPYLENE IMINE
P068	60-34-4	METHYL HYDRAZINE
P069	75-86-5	ACETONE CYANOHYDRIN
P071	298-00-08	METHYL PARATHION
P072	86-88-4	THIOUREA, 1-NAPHTHALENYL-(ANTU)
P073	13463-39-3	NICKEL CARBONYL
P074	557-19-78	NICKEL CYANIDE
P075	54-11-5	NICOTINE
P076	10102-43-9	NITRIC OXIDE
P077	100-01-68	P-NITROANILINE
P078	10102-44-0	NITROGEN DIOXIDE
P081	55-63-0	NITROGLYCERIN
P082	62-75-9	N-NITROSODIMETHYLAMINE
P084	4549-40-0	N-NITROSOMETHYL VINYLAMINE
P085	152-16-98	SCHRADAN
P087	20816-12-0	OSMIUM TETROXIDE
P088	145-73-38	ENDOTHAL
P089	56-38-2	PARATHION
P092	62-38-4	PHENYLMERCURIC ACETATE
P093	103-85-58	PHENYLTHIOUREA
P094	298-02-28	PHORATE
P095	75-44-5	PHOSGENE
P096	7803-51-2	PHOSPHINE
P097	52-85-7	FAMPHUR
P098	151-50-88	POTASSIUM CYANIDE
P099	506-61-68	POTASSIUM SILVER CYANIDE
P100	107-12-08	ETHYL CYANIDE
P101	107-12-08	PROPIONITRILE
P102	107-19-78	PROPARGYL ALCOHOL
P103	630-10-48	SELENOUREA
P104	506-64-98	SILVER CYANIDE
P105	26628-22-8	SODIUM AZIDE (NA(N3))

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
P106	143-33-98	SODIUM CYANIDE (NA(CN))
P108	57-24-9	STRYCHNINE
P109	3689-24-5	SULFOTEP
P110	78-00-2	TETRAETHYL LEAD
P111	107-49-38	TETRAETHYL PYROPHOSPHATE
P112	509-14-88	TETRANITROMETHANE
P113	1314-32-5	THALLIC OXIDE
P114	12039-52-0	SELENIOS ACID, DITHALLIUM(1 +) SALT
P115	7446-18-6	THALLOUS SULFATE
P116	79-19-6	THIOSEMICARBAZIDE
P119	7803-55-6	AMMONIUM METAVANADATE
P120	1314-62-1	VANADIUM PENTOXIDE
P121	557-21-18	ZINC CYANIDE
P122	1314-84-7	ZINC PHOSPHIDE
P123	8001-35-2	TOXAPHENE
U001	75-07-0	ACETALDEHYDE
U002	67-64-1	ACETONE
U003	75-05-8	ACETONITRILE
U004	98-86-2	ACETOPHENONE
U005	53-96-3	2-ACETYLAMINOFLUORENE
U006	75-36-5	ACETYL CHLORIDE
U007	79-06-1	ACRYLAMIDE
U008	79-10-7	ACRYLIC ACID
U009	107-13-18	ACRYLONITRILE, INHIBITED
U010	50-07-7	MITOMYCIN C
U011	61-82-5	AMITROLE
U012	62-53-3	ANILINE
U014	492-80-88	C.I. SOLVENT YELLOW 34
U015	115-02-68	AZASERINE
U016	225-51-48	BENZ(C)ACRIDINE
U017	98-87-3	BENZAL CHLORIDE
U018	56-55-3	BENZ(A)ANTHRACENE
U019	71-43-2	BENZENE
U020	98-09-9	BENZENESULFONYL CHLORIDE
U021	92-87-5	BENZIDINE
U022	50-32-8	BENZO(A)PYRENE
U023	98-07-7	BENZOIC TRICHLORIDE
U024	111-91-18	BIS(2-CHLOROETHOXY)METHANE
U025	111-44-48	2,2'-DICHLOROETHYL ETHER
U026	494-03-18	CHLORNAPHAZINE
U027	108-60-18	BIS(2-CHLOROISOPROPYL)ETHER
U028	117-81-78	DI-(2-ETHYLHEXYL)PHTHALATE
U029	74-83-9	METHYL BROMIDE
U030	101-55-38	4-BROMOPHENYL PHENYL ETHER
U031	71-36-3	N-BUTYL ALCOHOL
U032	13765-19-0	CALCIUM CHROMATE
U033	353-50-48	CARBONIC DIFLUORIDE
U034	75-87-6	ACETALDEHYDE, TRICHLORO-

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
U035	305-03-38	CHLORAMBUCIL
U036	57-74-9	CHLORDANE
U037	108-90-78	CHLOROBENZENE
U038	510-15-68	CHLOROBENZILATE
U039	59-50-7	4-CHLORO-M-CRESOL
U041	106-89-88	EPICHLOROHYDRIN
U042	110-75-88	2-CHLOROETHYL VINYL ETHER
U043	75-01-4	VINYL CHLORIDE
U044	67-66-3	CHLOROFORM
U045	74-87-3	METHYL CHLORIDE
U046	107-30-28	CHLOROMETHYL METHYL ETHER
U047	91-58-7	BETA-CHLORONAPHTHALENE
U048	95-57-8	O-CHLOROPHENOL
U049	3165-93-3	4-CHLORO-O-TOLUIDINE HYDROCHLORIDE
U050	218-01-98	1,2-BENZPHENANTHRENE
U051	8021-39-4	WOOD CREOSOTE
U052	1319-77-3	CRESOL
U053	4170-30-3	CROTONALDEHYDE
U055	98-82-8	CUMENE
U056	110-82-78	CYCLOHEXANE
U057	108-94-18	CYCLOHEXANONE
U058	50-18-0	CYCLOPHOSPHAMIDE
U059	20830-81-3	DAUNOMYCIN
U060	72-54-8	1,1-DICHLORO-2,2-BIS (P-CHLOROPHENYL)ETHANE
U061	50-29-3	DICHLORODIPHENYLTRICHLOROETHANE
U062	2303-16-4	DIALATE
U063	53-70-3	DIBENZ(A,H)ANTHRACENE
U064	189-55-98	DIBENZO(A,I)PYRENE
U066	96-12-8	1,2-DIBROMO-3-CHLOROPROPANE
U067	106-93-48	ETHYLENE DIBROMIDE
U068	74-95-3	METHYLENE BROMIDE
U069	84-74-2	DIBUTYL PHTHALATE
U070	95-50-1	O-DICHLOROBENZENE, LIQUID
U071	541-73-18	M-DICHLOROBENZENE
U072	106-46-78	P-DICHLOROBENZENE
U073	91-94-1	3,3'-DICHLOROBENZIDINE
U074	764-41-08	1,4-DICHLORO-2-BUTENE (I,T)
U075	75-71-8	DICHLORODIFLUOROMETHANE
U076	75-34-3	1,1-DICHLOROETHANE
U077	107-06-28	ETHYLENE DICHLORIDE
U078	75-35-4	VINYLDENE CHLORIDE
U079	156-60-58	TRANS-1,2-DICHLOROETHYLENE
U080	75-09-2	DICHLOROMETHANE
U081	120-83-28	2,4-DICHLOROPHENOL
U082	87-65-0	2,6-DICHLOROPHENOL
U083	78-87-5	PROPYLENE DICHLORIDE
U084	542-75-68	1,3-DICHLOROPHENOL

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
U085	1464-53-5	2,2-BIOXIRANE
U086	1615-80-1	1,2-DIETHYLHYDRAZINE
U087	3288-58-2	0,0-DIETHYL S-METHYL DITHIOPHOSPHATE
U088	84-66-2	DIETHYL PHTHALATE
U089	56-53-1	DIETHYLSTILBESTROL
U090	94-58-6	DIHYDROSAFROLE
U091	119-90-48	3,3'-DIMETHOXYBENZIDINE
U092	124-40-38	DIMETHYLAMINE, ANHYDROUS
U093	60-11-7	4-DIMETHYLAMINOAZOBENZENE
U094	57-97-6	7,12-DIMETHYLBENZ(A)ANTHRACENE
U095	119-93-78	3,3'-DIMETHYLBENZIDINE
U096	80-15-9	CUMENE HYDROPEROXIDE
U097	79-44-7	DIMETHYLCARBAMOYL CHLORIDE
U099	540-73-88	1,2-DIMETHYLHYDRAZINE
U101	105-67-98	2,4-XYLENOL
U102	131-11-38	DIMETHYL PHTHALATE
U103	77-78-1	DIMETHYL SULFATE
U105	121-14-28	2,4-DINITROTOLUENE
U106	606-20-28	2,6-DINITROTOLUENE
U107	117-84-08	DIOCTYL PHTHALATE
U108	123-91-18	1,4-DIOXANE
U109	122-66-78	1,2-DIPHENYLHYDRAZINE
U110	142-84-78	DIPROPYLAMINE
U111	621-64-78	N-NITROSODI-N-PROPYLAMINE
U112	141-78-68	ETHYL ACETATE
U113	140-88-58	ETHYL ACRYLATE
U114	111-54-68	ETHYLENEBIS(DITHIOCARBAMIC ACID)
U115	75-21-8	ETHYLENE OXIDE
U116	96-45-7	ETHYLENE THIOUREA
U117	60-29-7	ETHYL ETHER
U118	97-63-2	ETHYL METHACRYLATE
U119	62-50-0	ETHYL METHANESULFONATE
U120	206-44-08	FLUORANTHENE
U121	75-69-4	FLUOROTRICHLOROMETHANE
U122	50-00-0	FORMALDEHYDE GAS
U123	64-18-6	FORMIC ACID
U124	110-00-98	FURAN
U125	98-01-1	FURFURAL
U126	765-34-48	GLYCIDALDEHYDE
U127	118-74-18	HEXACHLOROBENZENE
U128	87-68-3	HEXACHLOROBUTADIENE
U129	58-89-9	LINDANE
U130	77-47-4	HEXACHLOROCYCLOPENTADIENE
U131	67-72-1	HEXACHLOROETHANE
U132	70-30-4	HEXACHLOROPHENE
U133	302-01-28	HYDRAZINE, ANHYDROUS

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
U134	7664-39-3	HYDROGEN FLUORIDE SOLUTION
U134	7664-39-3	HYDROGEN FLUORIDE
U135	7783-06-4	HYDROGEN SULFIDE
U136	75-60-5	CACODYLIC ACID
U137	193-39-58	INDENO(1,2,3-CD)PYRENE
U138	74-88-4	METHYL IODIDE
U139	9004-66-4	IRON DEXTRAN COMPLEX
U140	78-83-1	ISOBUTYL ALCOHOL
U141	120-58-18	ISOSAFROLE
U142	143-50-08	CHLORDECONE
U143	303-34-48	LASIOCARPINE
U144	301-04-28	LEAD ACETATE
U145	7446-27-7	LEAD PHOSPHATE
U146	1335-32-6	LEAD SUBACETATE
U147	108-31-68	MALEIC ANHYDRIDE
U148	123-33-18	MALEIC HYDRAZIDE
U149	109-77-38	MALONONITRILE
U150	148-82-38	MELPHALAN
U151	7439-97-6	MERCURY
U152	126-98-78	METHACRYLONITRILE
U153	74-93-1	METHYL MERCAPTAN
U154	67-56-1	METHYL ALCOHOL
U155	91-80-5	METHAPYRILENE
U156	79-22-1	METHYL CHLOROFORMATE
U157	56-49-5	3-METHYLCHOLANTHRENE
U158	101-14-48	4,4'-METHYLENEBIS(2-CHLOROBENZENAMINE)
U159	78-93-3	METHYL ETHYL KETONE
U160	1338-23-4	2-BUTANONE PEROXIDE
U161	108-10-18	METHYL ISOBUTYL KETONE
U162	80-62-6	METHYL METHACRYLATE, INHIBITED
U163	70-25-7	N-METHYL-N'-NITRO-N-NITROSOGUANIDINE
U164	56-04-2	METHYLTHIOURACIL
U165	91-20-3	NAPHTHALENE
U166	130-15-48	1,4-NAPHTHOQUINONE
U167	134-32-78	ALPHA-NAPHTHYLAMINE
U168	91-59-8	BETA-NAPHTHYLAMINE
U169	98-95-3	NITROBENZENE, LIQUID
U170	100-02-78	P-NITROPHENOL
U171	79-46-9	2-NITROPROPANE
U172	924-16-38	N-NITROSODI-N-BUTYLAMINE
U173	1116-54-7	N-NITROSODIETHANOLAMINE
U174	55-18-5	ETHANAMINE,N-ETHYL-N-NITROSO-
U176	759-73-98	N-NITROSO-N-ETHYLUREA
U177	684-93-58	N-NITROSO-N-METHYLUREA
U178	615-53-28	N-NITRO-N-METHYLURETHANE
U179	100-75-48	N-NITROSOPIPERIDINE
U180	930-55-28	N-NITROSOPYRROLIDINE
U181	99-55-8	5-NITRO-O-TOLUIDINE

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
U182	123-63-78	PARALDEHYDE
U183	608-93-58	PENTACHLOROBENZENE
U184	76-01-7	PENTACHLOROETHANE
U185	82-68-8	PENTACHLORONITROBENZENE
U186	504-60-98	1,3-PENTADIENE
U187	62-44-2	PHENACETIN
U188	108-95-28	PHENOL
U189	1314-80-3	PHOSPHOROUS PENTASULFIDE
U190	85-44-9	PHTHALIC ANHYDRIDE
U191	109-06-88	2-PICOLINE
U192	23950-58-5	PRONAMIDE
U193	1120-71-4	PROPANE SULTONE
U194	107-10-88	PROPYLAMINE
U196	110-86-18	PYRIDINE
U197	106-51-48	QUINONE
U200	50-55-5	RESERPINE
U201	108-46-38	RESORCINOL
U202	81-07-2	SACCHARIN
U203	94-59-7	SAFROLE
U204	7783-00-8	SELENIOUS ACID
U205	7488-56-4	SELENIUM DISULFIDE
U206	18883-66-4	STREPTOZOTOCIN
U207	95-94-3	1,2,4,5-TETRACHLOROBENZENE
U208	630-20-68	1,1,1,2-TETRACHLOROETHANE
U209	79-34-5	1,1,2,2-TETRACHLOROETHANE
U210	127-18-48	TETRACHLOROETHYLENE
U211	56-23-5	CARBON TETRACHLORIDE
U212	58-90-2	2,3,4,6-TETRACHLOROPHENOL
U213	109-99-98	TETRAHYDROFURAN
U214	563-68-88	THALLIUM ACETATE
U215	6533-73-9	THALLOUS CARBONATE
U216	7791-12-0	THALLIUM CHLORIDE
U217	10102-45-1	THALLIUM NITRATE
U218	62-55-5	THIOACETAMIDE
U219	62-56-6	THIOUREA
U220	108-88-38	TOLUENE
U221	25376-45-8	TOLUENEDIAMINE
U222	636-21-58	O-TOLUIDINE HYDROCHLORIDE
U223	26471-62-5	TOLUENE DIISOCYANATE (MIXED ISOMERS)
U225	75-25-2	BROMOFORM
U226	71-55-6	METHYL CHLOROFORM
U227	79-00-5	1,1,2-TRICHLOROETHANE
U228	79-01-6	TRICHLOROETHYLENE
U230	88-06-2	2,4,6-TRICHLOROPHENOL
U232	93-76-5	2,4,5-T ACID
U233	93-72-1	SILVEX (2,4,5-TP)
U234	99-35-4	1,3,5-TRINITROBENZENE

EPA HAZARDOUS WASTE NUMBERS -- COMMON CHEMICAL NAME

EPA HW #	CAS #	COMMON CHEMICAL NAME
U235	126-72-78	TRIS
U236	72-57-1	TRYPAN BLUE
U237	66-75-1	URACIL MUSTARD
U238	51-79-6	URETHANE
U239	95-47-6	O-XYLENE
U239	106-42-38	P-XYLENE
U239	108-38-38	M-XYLENE
U239	1330-20-7	XYLENE (MIXED ISOMERS)
U239	95-47-6	BENZENE, O-DIMETHYL-
U239	106-42-38	BENZENE, P-DIMETHYL-
U239	108-38-38	BENZENE, M-DIMETHYL-
U240	94-75-7	2,4-DICHLOROPHENOXYACETIC ACID
U242	87-86-5	PENTACHLOROPHENOL
U243	1888-71-7	HEXACHLOROPROPENE
U244	137-26-88	THIRAM
U246	506-68-38	CYANOGEN BROMIDE
U247	72-43-5	METHOXYCHLOR
U248	506-68-38	CYANOGEN BROMIDE
U249	1314-84-7	ZINC PHOSPHIDE (CONC. < = 10%)
U328	95-53-4	O-YOLUIDINE
U353	106-49-08	P-TOLUIDINE
U359	110-80-58	2-ETHOXYETHANOL

**ENVIRONMENTAL RISK INFORMATION & IMAGING SERVICES
AERIAL PHOTOGRAPH SEARCH REPORT**

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ERIIS Report #134112A

Dec 18, 1996
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VENDOR NAME	STREET	STATE	ZIP	PHONE				
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE	AERAIL PHOTOGRAPHY FIELD OFFICE P O BOX 30010	UT	84130-0010	(801) 975-3503				
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1951 JUL 24	VERTICAL CARTO (IMPLIES STEREO)	BXL	20000	8.25in OR 210mm	B&W	0%	100%	01
1958 MAY 01	VERTICAL CARTO (IMPLIES STEREO)	BXL	20000	8.25in OR 210mm	B&W	0%	100%	01
1964 MAY 21	VERTICAL CARTO (IMPLIES STEREO)	BXL	20000	8.25in OR 210mm	B&W	0%	100%	04
1970 JUL 05	VERTICAL CARTO (IMPLIES STEREO)	BXL	20000	8.25in OR 210mm	B&W	0%	100%	04
1979 SEP 26	VERTICAL CARTO (IMPLIES STEREO)		40000	6.00in OR 152mm	B&W	0%	100%	04
1981 MAY	VERTICAL CARTO (IMPLIES STEREO)	NHAP	58000	8.25in OR 210mm	COLOR	0%	100%	HIGH ALT PRGM
SOIL CONSERVATION SERVICE AERIAL PHOTOGRPAHY FIELD OFFICE	P O BOX 30010	UT	84130-0010	(801) 975-3503				
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1970 MAY	VERTICAL CARTO (IMPLIES STEREO)	BXL	38000	6.00in OR 152mm	B&W	0%	100%	
U S ARMY DEPT OF THE ARMY EDC								(800) USA-MAPS
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1958 AUG 03	VERTICAL CARTO (IMPLIES STEREO)	001	66000	UNKOWN	B&W	0%	100%	1 610940330
U S GEOLOGICAL SURVEY RESTON ESIC		507 NATIONAL CENTER				VA	22092	(703) 648-5920
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1956 APR 18	VERTICAL CARTO (IMPLIES STEREO)	VMU	17104	OTHER	B&W	0%	100%	
1970 NOV 07	VERTICAL CARTO (IMPLIES STEREO)	VCOS	20013	OTHER	B&W	0%	100%	
1946 OCT 20	VERTICAL CARTO (IMPLIES STEREO)	CB	27199	OTHER	B&W	0%	100%	
1976 APR 06	VERTICAL CARTO (IMPLIES STEREO)	VEDB	38000	OTHER	B&W	0%	100%	
1981 MAY 01	VERTICAL CARTO (IMPLIES STEREO)	N4288	58000	OTHER	COLOR	0%	100%	
1981 MAY 01	VERTICAL CARTO (IMPLIES STEREO)	N4288	80000	OTHER	B&W	0%	100%	
1988 JUN 01	VERTICAL CARTO (IMPLIES STEREO)	N4288	58000	OTHER	COLOR	0%	100%	
1988 JUN 01	VERTICAL CARTO (IMPLIES STEREO)	N4288	80000	OTHER	B&W	0%	100%	
1988	VERTICAL CARTO (IMPLIES STEREO)	NP8827	0040000	6.00in OR 152mm	COLOR	0%	100%	NAPP-LEAF OFF
NATIONAL ARCHIVES & RECORDS ADMIN CARTOGRAPHIC & ARCHITECTURAL BR	8601 ADELPHI RD	MD	20740-6001	(301) 713-7040				
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1939	VERTICAL CARTO (IMPLIES STEREO)	BXL	20000	8.25in OR 210mm	B&W	0%	100%	ASCS PROJECT
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, JS		JOHNSON SPACE CENTER						(800) USA-MPAS
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1971 APR 24	VERTICAL RECONNAISSANCE	1710	96385	6.00in OR 152mm	B&W	0%	100%	617100100 4790 4
1971 APR 24	VERTICAL RECONNAISSANCE	1710	97831	6.00in OR 152mm	B&W	0%	80%	617100100 4784 4
1971 APR 24	VERTICAL RECONNAISSANCE	1710	100267	6.00in OR 152mm	B&W	0%	100%	617100100 4668 4
1971 MAY 13	VERTICAL RECONNAISSANCE	1660	120056	6.00in OR 152mm	COLOR	0%	100%	616600020 7843 7

**ENVIRONMENTAL RISK INFORMATION & IMAGING SERVICES
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VENDOR NAME	STREET	STATE	ZIP	PHONE				
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1971 MAY 13	VERTICAL RECONNAISSANCE	1660	121682	6.00in OR 152mm	COLOR	0%	20%	616600020 7834 7
1971 JUN 26	VERTICAL RECONNAISSANCE	1730	117600	6.00in OR 152mm	COLOR	0%	100%	617300070 6805 6
1971 JUN 29	VERTICAL RECONNAISSANCE	1740	120369	6.00in OR 152mm	COLOR	0%	100%	617400020 7185 7
1971 JUL 13	VERTICAL RECONNAISSANCE	1750	117835	6.00in OR 152mm	COLOR	10%	100%	617500020 8583 8
1971 AUG 11	VERTICAL RECONNAISSANCE	1770	120704	6.00in OR 152mm	COLOR	10%	100%	617700150 0608 0
1971 AUG 11	VERTICAL RECONNAISSANCE	1770	123769	6.00in OR 152mm	COLOR	10%	100%	617700150 0606 0
1971 AUG 17	VERTICAL RECONNAISSANCE	1770	118466	6.00in OR 152mm	COLOR	80%	30%	617700120 0406 0
1971 AUG 17	VERTICAL RECONNAISSANCE	1770	119188	6.00in OR 152mm	COLOR	50%	100%	617700120 0411 0
1971 AUG 17	VERTICAL RECONNAISSANCE	1770	121594	6.00in OR 152mm	COLOR	90%	30%	617700120 0413 0
1971 AUG 25	VERTICAL RECONNAISSANCE	1780	121639	6.00in OR 152mm	COLOR	0%	100%	617800060 8585 8
1971 AUG 25	VERTICAL RECONNAISSANCE	1780	122197	6.00in OR 152mm	COLOR	0%	80%	617800060 8601 8
1971 SEP 21	VERTICAL RECONNAISSANCE	1800	117065	1.97in OR 50mm	COLOR	20%	100%	618000030 0127 0
1972 JUN 04	VERTICAL RECONNAISSANCE	2050	64184	12.00in OR	COLOR	0%	80%	620500220 0348 0
1972 JUN 04	VERTICAL RECONNAISSANCE	2050	64209	12.00in OR	COLOR	0%	80%	620500220 0362 0
1972 JUN 04	VERTICAL RECONNAISSANCE	2050	120603	6.00in OR 152mm	COLOR	10%	100%	620500200 0189 0
1972 JUN 04	VERTICAL RECONNAISSANCE	2050	120932	6.00in OR 152mm	COLOR	0%	100%	620500200 0174 0
1972 JUN 04	VERTICAL RECONNAISSANCE	2050	122175	6.00in OR 152mm	COLOR	0%	100%	620500210 0181 0
1974 JUL 31	VERTICAL RECONNAISSANCE	2790	120000	6.00in OR 152mm	COLOR	0%	70%	627900100 0115 0
WHITTIER COLLEGE DEPT OF GEOLOGY	13406 EAST PHILADELPHIA ST	CA	90608	(310) 907-4220				
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1956	UNKNOWN	22508	4800	UNKOWN	B&W	UNK	50%	FAIRCHILD DATA
1956	UNKNOWN	22650	12000	UNKOWN	B&W	UNK	100%	FAIRCHILD DATA
SIDWELL CO	28 WEST 240 NORTH ST	IL	60185	(708) 231-8200				
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1978 MAR	VERTICAL CARTO (IMPLIES STEREO)	00	10800	3.46in OR 88mm	B&W	0%	100%	
1978 MAR	VERTICAL CARTO (IMPLIES STEREO)	00	24000	6.00in OR 152mm	B&W	0%	100%	
MARKHURD CORP	13400 68TH AVE	MN	55368	(612) 420-9606				
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1988 APR	VERTICAL CARTO (IMPLIES STEREO)	IL	40000	6.00in OR 152mm	B&W	0%	100%	WINNEBAGO 1/4QD
WISCONSIN DEPT OF TRANSPORTATION	4802 SHEBOYGAN AVE RM 5B	WI	53707	(608) 266-0309				
DATE OF COVERAGE	SENSOR CLASS	PROJECT CODE	SCALE	FOCAL LENGTH	FILM TYPE	CLOUD COVER	QUADRANGLE COVERAGE	REMARKS
1938	VERTICAL CARTO (IMPLIES STEREO)		0003000	6.00in OR 152mm	B&W IR	0%	20%	TOWNSHIP CENTERD
1968	VERTICAL CARTO (IMPLIES STEREO)		0072000	6.00in OR 152mm	B&W	0%	20%	TOWNSHIP CENTERD
1992	VERTICAL CARTO (IMPLIES STEREO)		0040000	6.00in OR 152mm	B&W	0%	20%	TOWNSHIP CENTERD
1975 NOV 15	VERTICAL CARTO (IMPLIES STEREO)	75-3	9600	6.00in OR 152mm	B&W	0%	30%	ROCK COUNTY WI

**ENVIRONMENTAL RISK INFORMATION & IMAGING SERVICES
DATABASE REFERENCE GUIDE**

NPL

Date of Data: 05/01/1996
Release Date: 05/13/1996
Date on System: 07/26/1996
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
703/603-8881

National Priorities List

The NPL Report, also known as the Superfund List, is an EPA listing of uncontrolled or abandoned hazardous waste sites. The list is primarily based upon a score which the site receives from the EPA's Hazardous Ranking System. These sites are targeted for possible long-term remedial action under the Superfund Act of 1980.

RCRIS TS

Date of Data: 05/10/1996
Release Date: 06/10/1996
Date on System: 07/19/1996
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
202/260-4610

Resource Conservation and Recovery Information System - Treatment, Storage, And Disposal Facilities

The RCRIS TS Report contains information pertaining to facilities which either treat, store, or dispose of EPA regulated hazardous waste. The following information is also included in the RCRIS TS Report:

- Information pertaining to the status of facilities tracked by the RCRA Administrative Action Tracking System (RAATS)
- Inspections & evaluations conducted by federal and state agencies
- All reported facility violations, the environmental statute(s) violated, and any proposed & actual penalties
- Information pertaining to corrective actions undertaken by the facility or EPA
- A complete listing of EPA regulated hazardous wastes which are generated or stored on-site

CERCLIS

Date of Data: 05/01/1996
Release Date: 05/13/1996
Date on System: 07/19/1996
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
703/603-8730

Comprehensive Environmental Response, Compensation, and Liability Information System

The CERCLIS Database is a comprehensive listing of known or suspected uncontrolled or abandoned hazardous waste sites. These sites have either been investigated, or are currently under investigation by the U.S. EPA for the release, or threatened release of hazardous substances. Once a site is placed in CERCLIS, it may be subjected to several levels of review and evaluation, and ultimately placed on the National Priorities List (NPL). As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from the CERCLIS Database.

NFRAP

Date of Data: 05/01/1996
Release Date: 05/13/1996
Date on System: 08/02/1996
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
703/603-8881

No Further Remedial Action Planned Sites

The No Further Remedial Action Planned Report (NFRAP), also known as the CERCLIS Archive, contains information pertaining to sites which have been removed from the U.S. EPA's CERCLIS Database. NFRAP sites may be sites where, following an initial investigation, either no contamination was found, contamination was removed quickly without need for the site to be placed on the NPL, or the contamination was not serious enough to require federal Superfund action or NPL consideration.

RCRIS LG

Date of Data: 05/10/1996
Release Date: 06/10/1996
Date on System: 07/19/1996
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
202/260-4610

Resource Conservation and Recovery Information System - Large Quantity Generators

The RCRIS LG Report contains information pertaining to facilities which either generate more than 1000kg of EPA regulated hazardous waste per month, or meet other applicable requirements of the Resource Conservation And Recovery Act. The following information is also included in the RCRIS LG Report:

- Information pertaining to the status of facilities tracked by the RCRA Administrative Action Tracking System (RAATS)
- Inspections & evaluations conducted by federal and state agencies
- All reported facility violations, the environmental statute(s) violated, and any proposed & actual penalties
- Information pertaining to corrective actions undertaken by the facility or EPA
- A complete listing of EPA regulated hazardous wastes which are generated or stored on-site

RCRIS SG

Date of Data: 05/10/1996
Release Date: 06/10/1996
Date on System: 07/19/1996
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
202/260-4610

Resource Conservation and Recovery Information System - Small Quantity Generators

The RCRIS SG Report contains information pertaining to facilities which either generate between 100kg and 1000kg of EPA regulated hazardous waste per month, or meet other applicable requirements of the Resource Conservation And Recovery Act. On advice of the U.S. EPA, ERIIS does not report so-called "RCRA Protective Filers." Protective Filers, commonly called Conditionally Exempt Small Quantity Generators (CESQG's), are facilities that have completed RCRA notification paperwork, but are not, in fact, subject to RCRA regulation. The determination of CESQG status is made by the U.S. EPA. The following information is also included in the RCRIS SG Report:

- Information pertaining to the status of facilities tracked by the RCRA Administrative Action Tracking System (RAATS)
- Inspections & evaluations conducted by federal and state agencies
- All reported facility violations, the environmental statute(s)

**ENVIRONMENTAL RISK INFORMATION & IMAGING SERVICES
DATABASE REFERENCE GUIDE**

violated, and any proposed & actual penalties
- Information pertaining to corrective actions undertaken by the facility or EPA
- A complete listing of EPA regulated hazardous wastes which are generated or stored on-site

DOCKET

Date of Data: 10/23/1996
Release Date: 11/08/1996
Date on System: 12/13/1996
US Environmental Protection Agency
Office of Enforcement
202/564-4114

Civil Enforcement Docket

The Civil Enforcement Docket is the U.S. Environmental Protection Agency's system for tracking civil judicial cases filed on the Agency's behalf by the U.S. Department Of Justice. This report contains information on cases from 1972 to the present.

TRI

Date of Data: 12/31/1992
Release Date: 05/01/1994
Date on System: 07/01/1994
US Environmental Protection Agency
Office of Pollution Prevention and Toxics
202/260-1531

Toxic Release Inventory System of 1992

The TRI Report contains information concerning the industrial release and/or transfer of toxic chemicals as reportable under Title III of the Superfund Amendments And Reauthorization Act Of 1986 (SARA Title III).

ERNS

Date of Data: 08/22/1996
Release Date: 08/26/1996
Date on System: 11/22/1996
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
202/260-2342

Emergency Response Notification System

ERNS is a national computer database system that is used to store information concerning the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS Reporting System contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party. Please note that the information in the ERNS Report pertains only to those releases that occurred between January 1, 1996 and August 22, 1996.

ERNS92

Date of Data: 12/31/1992
Release Date: 05/01/1993
Date on System: / /
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
202/260-2342

Emergency Response Notification System - 1992

ERNS is a national computer database system that is used to store information on the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS Reporting System contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party. Please note that the information in the ERNS Report pertains only to those releases that occurred during 1992.

ERNS ALL

Date of Data: 12/31/1991
Release Date: / /
Date on System: / /
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
202/260-2342

Emergency Response Notification System 1987-1991

ERNS is a national computer database system that is used to store information on the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS Reporting System contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party. Please note that the information in the ERNS Report pertains only to those releases that occurred between 1987-1991.

ERNS93

Date of Data: 12/31/1993
Release Date: 02/28/1994
Date on System: 12/21/1994
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
202/260-2342

Emergency Response Notification System - 1993

ERNS is a national computer database system that is used to store information on the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS Reporting System contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party. Please note that the information in the ERNS Report pertains only to those releases that occurred during 1993.

ERNS94

Date of Data: 07/14/1994
Release Date: 12/06/1994
Date on System: 12/21/1994
US Environmental Protection Agency
Office of Solid Waste and Emergency Response
202/260-2342

Emergency Response Notification System - 1994

ERNS is a national computer database system that is used to store information on the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS Reporting System contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party. Please note that the information in the ERNS Report pertains only to those releases that occurred between January 1, 1994 and July 14, 1994.

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HWS

Date of Data: 08/01/1996
Release Date: 11/07/1996
Date on System: 12/13/1996
IL Environmental Protection Agency

217/782-3397

Illinois Category List

The Illinois Category List is a summary listing of those facilities that are deemed potentially hazardous by the Illinois Environmental Protection Agency. The Status field indicates which Illinois EPA Program is responsible for regulating the facility.

LRST

Date of Data: 07/16/1996
Release Date: 07/17/1996
Date on System: 08/30/1996
IL Environmental Protection Agency
LUST Section
217/524-5907

Illinois Leaking Underground Storage Tank Report

The Illinois Leaking Underground Storage Tank Report is a comprehensive listing of all reported leaking underground storage tanks reported within the State of Illinois.

SWF

Date of Data: 08/30/1993
Release Date: 09/01/1993
Date on System: 10/01/1993
IL Haz. Waste Research & Info. Center
Land-Based Disposal Sites Program
217/333-8940

Illinois Land-Based Disposal Sites Report

The Illinois Land-Based Disposal Site Report is an inventory of all active and historical waste disposal sites located within the State of Illinois. The inventory includes sites of all types including: municipal, industrial, hazardous, surface impoundments, illegal dumps, landfills, etc... Landfills tracked by the Northeastern Illinois Planning Commission are also included in the LBDS Report.

RST

Date of Data: 05/01/1996
Release Date: 06/04/1996
Date on System: 08/16/1996
World of Printing
Office of the State Fire Marshal
217/753-6501

Illinois Underground Storage Tank Report

The Illinois Underground Storage Tank Report is a comprehensive listing of all registered underground storage tanks located within the State of Illinois.

ERIIS SUMMARY OF PLOTTABLE SITES

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID.	FACILITY/ADDRESS	DATABASE	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
0 - 1/4 Miles					
17010032318	SHIPLER CONST CO INC 4968 E ROCKTON RD ROSCOE, IL 61073-8994 COUNTY: WINNEBAGO	RST	0.017 Mi	NORTHWEST	2318
1/4 - 1/2 Miles					
17010032311	MAKERITE MFG CO 13571 METRIC RD ROSCOE, IL 61073-9712 COUNTY: WINNEBAGO	RST	0.277 Mi	NORTHEAST	2311
17008002428	MAKERITE MFG CO INC 13571 METRIC RD ROSCOE, IL 61073-9712 COUNTY: WINNEBAGO	RCRIS_SG	0.277 Mi	NORTHEAST	2428
17023003252	AAA DISPOSAL SYSTEMS INC ROSCOE, IL COUNTY: WINNEBAGO	SWF	0.300 Mi	SOUTHEAST	3252
17010032338	CLELAND VICKI 13850 DEARBORN AVE SOUTH BELOIT, IL 61080-9472 COUNTY: WINNEBAGO	RST	0.314 Mi	NORTHWEST	2338
17010032320	WASTE MANAGEMENT OF WISCONSIN 13125 N 2ND ST ROSCOE, IL 61073-8227 COUNTY: WINNEBAGO	RST	0.382 Mi	SOUTHEAST	2320
17006681	WASTE MGT OF ROCKFORD 13121 N 2ND ST ROSCOE, IL 61073-8227 COUNTY: WINNEBAGO	RCRIS_SG	0.385 Mi	SOUTHEAST	6681
17010032356	ST MARYS PEERLESS CEMENT CO 13700 DEARBORN AVE SOUTH BELOIT, IL 61080-9471 COUNTY: WINNEBAGO	RST	0.418 Mi	NORTHWEST	2356
17023003254	ERICKSON, ELDEN ROSCOE, IL COUNTY: WINNEBAGO	SWF	0.435 Mi	SOUTHEAST	3254
1/2 - 1 Miles					
17007002692	SALTER BROADCASTING CO 4570 E ROCKTON RD ROSCOE, IL 61073-7418 COUNTY: WINNEBAGO	RCRIS_LG	0.531 Mi	SOUTHWEST	2692
17010032303	ELECTRO CAM CORPORATION 13701 METRIC RD ROSCOE, IL 61073-7639 COUNTY: WINNEBAGO	RST	0.575 Mi	NORTHEAST	2303
17023003249	BELOIT FOUNDRY CO ROSCOE, IL COUNTY: WINNEBAGO	SWF	0.590 Mi	NORTHEAST	3249
17003003250	CHRISTENSEN, STAN ROSCOE, IL COUNTY: WINNEBAGO	SWF	0.617 Mi	NORTHEAST	3250
17023003343	DURGEON PIPE CO. S BELOIT, IL COUNTY: WINNEBAGO	SWF	0.665 Mi	NORTHWEST	3343
17023003401	BEHIND STATELINE PRINTING ROSCOE TWP, IL COUNTY: WINNEBAGO	SWF	0.690 Mi	SOUTHEAST	3401
17005009893	WARNER ELECTRIC BRAKE & CLUTCH HWY. 251 & MCCURRY RD. ROSCOE, IL COUNTY: WINNEBAGO	LRST	0.975 Mi	SOUTHEAST	9893
17013000074	WARNER ELECTRIC BRAKE & CLUTCH CO HWY 251 & MCCURRY RD ROSCOE, IL 61073 COUNTY: WINNEBAGO	RCRIS_TS	0.975 Mi	SOUTHEAST	74
> 1 Mile					
17039001113	GOLDIE FLOBERG CNTR WELLS 1MI E OF ROCKTON ROCKTON, IL 61072 COUNTY: WINNEBAGO	NFRAP	1.009 Mi	SOUTHWEST	1113
17010032301	DANA CORP 5253 MCCURRY RD ROSCOE, IL 61073-9552 COUNTY: WINNEBAGO	RST	1.012 Mi	SOUTHEAST	2301
17010032349	MATERIAL SERVICE CORP 4633 PRAIRIE HILL RD SOUTH BELOIT, IL 61080-2540 COUNTY: WINNEBAGO	RST	1.056 Mi	NORTHWEST	2349

ERIS SUMMARY OF PLOTTABLE SITES

ERIS Report #134112A

Dec 18, 1996

ERIS ID.	FACILITY/ADDRESS	DATABASE	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17009000980	WOODWARD GOVERNOR CO. 1 WOODWARD WAY ROCKTON, IL 61072-1673 COUNTY: WINNEBAGO	TRI	1.634 Mi	NORTHWEST	980
17008007371	SENTRO 5365 EDITH LN ROSCOE, IL 61073-9573 COUNTY: WINNEBAGO	RCRIS_SG	1.663 Mi	SOUTHEAST	7371
17008002029	FOREST CITY GEAR CO 11715 MAIN ST ROSCOE, IL 61073-9567 COUNTY: WINNEBAGO	RCRIS_SG	1.815 Mi	SOUTHEAST	2029
17010032300	CHARLES LAGRENE 11611 MAIN ST ROSCOE, IL 61073-9587 COUNTY: WINNEBAGO	RST	1.894 Mi	SOUTHEAST	2300
17005004549	HONONEGAH MOBIL 5213 ELEVATOR RD ROSCOE, IL 61073-9229 COUNTY: WINNEBAGO	LRST	1.931 Mi	SOUTHEAST	4549
17010032309	KELLEY WILLIAMSON COMPANY 5213 ELEVATOR RD ROSCOE, IL 61073-9229 COUNTY: WINNEBAGO	RST	1.931 Mi	SOUTHEAST	2309
17008008286	TOWN AND COUNTRY CLEANERS 5518 CLAYTON CIR ROSCOE, IL 61073-9533 COUNTY: WINNEBAGO	RCRIS_SG	1.952 Mi	SOUTHEAST	8286

ERIIS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
RCRIS_TS - PLOTTABLE SITES - PAGE 1

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID EPA ID	FACILITY	ADDRESS	RAATS ISSUE DATE RAATS ACTION/STATUS RAATS PENALTIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17013000074 ILD006114169	WARNER ELECTRIC BRAKE & CLUTCH CO COUNTY: WINNEBAGO	HWY 251 & MCCURRY RD ROSCOE, IL 61073	// ACTION CODE: 3008(H) STATUS: CONSENT AGREEMENT/FINAL ORDER PROPOSED : \$ 0.00 FINAL: \$0.00	0.975 MILES	SOUTHEAST	74

FACILITY VIOLATIONS

	DATE DETERMINED:	DATE RESOLVED:	AREA OF VIOLATION:
1.	06/30/95	10/04/95	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
2.	04/20/93	09/16/94	GENERATOR-ALL REQUIREMENTS
3.	10/23/92	02/02/93	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
4.	03/07/89	07/03/89	GENERATOR-ALL REQUIREMENTS
5.	06/05/85	05/07/86	GENERATOR-ALL REQUIREMENTS

FACILITY EVALUATIONS

	EVALUATION DATE:	EVALUATION AGENCY:	TYPE OF EVALUATION:	AREA(S) OF EVALUATION:
1.	06/05/85	STATE	COMPLIANCE EVALUATION INSPECTION	GENERATOR-ALL REQUIREMENTS
2.	03/07/89	STATE	COMPLIANCE EVALUATION INSPECTION	GENERATOR-ALL REQUIREMENTS
3.	04/26/89	STATE	COMPLIANCE SCHEDULE EVALUATION	GENERATOR-ALL REQUIREMENTS
4.	10/23/92	STATE	FINANCIAL RECORD REVIEW	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
5.	04/20/93	STATE	COMPLIANCE EVALUATION INSPECTION	GENERATOR-ALL REQUIREMENTS
6.	06/30/95	STATE	FINANCIAL RECORD REVIEW	GENERATOR-LAND BAN REQUIREMENTS TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS

FACILITY ENFORCEMENTS

	ENFORCEMENT DATE:	ENFORCEMENT AGENCY:	TYPE OF ACTION:	PENALTY(S):
1.	06/20/1985	STATE	WRITTEN, INFORMAL ADMINISTRATIVE ACTION	
2.	04/05/1989	STATE	WRITTEN, INFORMAL ADMINISTRATIVE ACTION	
3.	12/21/1992	STATE	WRITTEN, INFORMAL ADMINISTRATIVE ACTION	
4.	07/09/1993	STATE	WRITTEN, INFORMAL ADMINISTRATIVE ACTION	
5.	07/14/1995	STATE	WRITTEN, INFORMAL ADMINISTRATIVE ACTION	

CORRECTIVE ACTIONS

	ACTION ISSUE DATE:	TYPE OF ACTION:
1.	12/28/89	CONSENT ORDER

	ACTION EFFECTIVE	STATUTE VIOLATED:
1.	12/28/89	RCRA 3008(h) OR EQUIVALENT

	EVENT ACTUAL DATE:	SITE EVENT:
1.	12/28/89	RFA COMPLETED

ERIS Report #134112A

ERIIS ID EPA ID	FACILITY	ADDRESS	RAATS ACTION/STATUS RAATS PENALTIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
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DETERMINATION OF NEED FOR AN RFI--RFI IS NECESSARY
CA PRIORITIZATION--FACILITY ASSIGNED A HIGH CORRECTIVE ACTION PRIORITY
CA PRIORITIZATION--FACILITY ASSIGNED A HIGH CORRECTIVE ACTION PRIORITY
RFI IMPOSITION--DATA COLLECTION REQUIRED
RFI - WORKPLAN NOTICE OF DEFICIENCY ISSUED
RFI WORKPLAN APPROVED
RFI APPROVED
CMS IMPOSITION
CMS WORKPLAN APPROVED
CMS APPROVED
CMS APPROVED
DATE FOR REMEDY SELECTION (CM IMPOSED)
CORRECTIVE MEASURES DESIGN APPROVED
CMI WORKPLAN APPROVED
STABILIZATION MEASURES IMPLEMENTED
STABILIZATION CONSTRUCTION COMPLETED

1.	F002	.00000
2.	F017	.00000
3.	F018	.00000
4.	U228	.00000

NOTIFICATION
NOTIFICATION
NOTIFICATION
NOTIFICATION

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Dec 18, 1996

ERIIS ID EPA ID	FACILITY	ADDRESS	COUNTY	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17001000377 ILD984836734	EVERGREEN MANOR GROUNDWATER CONTAMINATION	MCCURRY & ELEVATOR ROAD ROSCOE, IL 61073	WINNEBAGO	1.416 MILES	SOUTHWEST	377
	<u>SITE EVENT</u>	<u>START DATE</u>	<u>COMPLETION DATE</u>			
	DISCOVERY		08/03/91			
	PRELIMINARY ASSESSMENT		04/15/92			
	SITE INSPECTION	07/31/92	09/30/92			
	EXPANDED SITE INSPECTION	11/05/93	06/23/95			

ERIIS ENVIRONMENTAL DATA REPORT
CERCLIS NO FURTHER REMEDIAL ACTION PLANNED SITES
NFRAP - PLOTTABLE SITES - PAGE 1

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID EPA ID	FACILITY	FACILITY ADDRESS	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP II
17039001113 ILD981956519	GOLDIE FLOBERG CNTR WELLS COUNTY: WINNEBAGO	1MI E OF ROCKTON ROCKTON, IL 61072	1.009 MILES	SOUTHWEST	1113
	<u>SITE EVENT(S)</u> DISCOVERY PRELIMINARY ASSESSMENT SCREENING SITE INSPECTION NOT REPORTED	<u>COMPLETE DATE</u> 04/23/87 06/19/87 10/22/90 09/02/94			

ERIS Report #134112A

ERIIS ID EPA ID	FACILITY	ADDRESS	RAATS ACTION/STATUS RAATS PENALTIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17007002692 ILD984781807	SALTER BROADCASTING CO COUNTY: WINNEBAGO	4570 E ROCKTON RD ROSCOE, IL 61073-7418	FACILITY NOT REPORTED IN RAATS	0.531 MILES	SOUTHWEST	2692

	WASTE CODE:	AMOUNT OF WASTE:	SOURCE OF INFO:
1.	X002	.00000	NOTIFICATION

HAZARDOUS WASTES

	WASTE CODE:	AMOUNT OF WASTE:	SOURCE OF INFO:
1.	D001	.00000	NOTIFICATION

HAZARDOUS WASTES

	WASTE CODE:	AMOUNT OF WASTE:	SOURCE OF INFO:
1.	D000	.00000	NOTIFICATION
2.	D001	.00000	NOTIFICATION
3.	D006	.00000	NOTIFICATION
4.	D007	.00000	NOTIFICATION
5.	D008	.00000	NOTIFICATION
6.	F001	.00000	NOTIFICATION
7.	F003	.00000	NOTIFICATION
8.	F005	.00000	NOTIFICATION

**ERHS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
RCRIS_SG - PLOTTABLE SITES - PAGE 1**

ERHS Report #134112A

Dec 18, 1996

ERIIS ID EPA ID	FACILITY	ADDRESS	RAATS ISSUE DATE RAATS ACTION/STATUS RAATS PENALTIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17008002428 ILD063498414	MAKERITE MFG CO INC COUNTY: WINNEBAGO	13671 METRIC RD ROSCOE, IL 61073-9712	FACILITY NOT REPORTED IN RAATS	0.277 MILES	NORTHEAST	2428
<u>HAZARDOUS WASTES</u>						
1. WASTE CODE: D001	AMOUNT OF WASTE: .00000	SOURCE OF INFO: NOTIFICATION				
17008006681 ILD984801829	WASTE MGT OF ROCKFORD COUNTY: WINNEBAGO	13121 N 2ND ST ROSCOE, IL 61073-8227	FACILITY NOT REPORTED IN RAATS	0.385 MILES	SOUTHEAST	6681
<u>HAZARDOUS WASTES</u>						
1. WASTE CODE: D001	AMOUNT OF WASTE: .00000	SOURCE OF INFO: NOTIFICATION				
17008005956 ILD984782714	MATERIAL SERVICE CORP YARD 50 COUNTY: WINNEBAGO	4633 PRAIRIE HILL RD SOUTH BELoit, IL 61080-2540	FACILITY NOT REPORTED IN RAATS	1.056 MILES	NORTHWEST	5956
<u>HAZARDOUS WASTES</u>						
1. WASTE CODE: D001	AMOUNT OF WASTE: .00000	SOURCE OF INFO: NOTIFICATION				
17008004013 ILD980615074	COLT INDUSTRIES ENGINE ACCESSORIES OPER COUNTY: WINNEBAGO	6402 E ROCKTON RD ROSCOE, IL 61073-8812	FACILITY NOT REPORTED IN RAATS	1.306 MILES	NORTHEAST	4013
<u>HAZARDOUS WASTES</u>						
1. WASTE CODE: D000	AMOUNT OF WASTE: .00000	SOURCE OF INFO: NOTIFICATION				
2. D001	.00000	NOTIFICATION				
3. D002	.00000	NOTIFICATION				
4. F001	.00000	NOTIFICATION				
5. F002	.00000	NOTIFICATION				
6. U226	.00000	NOTIFICATION				
17008007371 ILD984817791	SENTRO COUNTY: WINNEBAGO	5365 EDITH LN ROSCOE, IL 61073-9573	FACILITY NOT REPORTED IN RAATS	1.663 MILES	SOUTHEAST	7371

ERIS Report #134112A

ERIIS ID EPA ID	FACILITY	ADDRESS	RAATS ACTION/STATUS RAATS PENALTIES	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
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	WASTE CODE:	AMOUNT OF WASTE:	SOURCE OF INFO:
1.	D001	.00000	NOTIFICATION
2.	F001	.00000	NOTIFICATION

HAZARDOUS WASTES

HAZARDOUS WASTES

	WASTE CODE:	AMOUNT OF WASTE:	SOURCE OF INFO:
1.	D000	.00000	NOTIFICATION
2.	F002	.00000	NOTIFICATION

**ERIS ENVIRONMENTAL DATA REPORT
TOXIC RELEASE INVENTORY SYSTEM
TRI - PLOTTABLE SITES - PAGE 1**

ERIS Report #134112A

Dec 18, 1996

ERIS ID EPA ID	FACILITY FACILITY ID	ADDRESS	COUNTY	SIC CODE	CONTACT PHONE	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17009000980 ILD982609331	WOODWARD GOVERNOR CO. 61072WDWRDNEWOW	1 WOODWARD WAY ROCKTON, IL 61072	WINNEBAGO	3728	PHIL TURNER (815) 877-7441	1.634 MILES	NORTHWEST	980

CHEMICAL	RELEASES (LBS.) TRANSFERS (LBS.)					TOTAL	POTW	OFF-SITE	TOTAL
	FUGITIVE AIR	STACK AIR	WATER	UNDER INJECTION	LAND				
1,1,1-TRICHLOROETHANE	1628	3799	0	0	0	5427	0	16986	16986

**ERIIS ENVIRONMENTAL DATA REPORT
ILLINOIS LEAKING UNDERGROUND STORAGE TANKS
LRST - PLOTTABLE SITES - PAGE 1**

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID	FACILITY	ADDRESS	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17005009893	WARNER ELECTRIC BRAKE & CLUTCH COUNTY: WINNEBAGO <u>IEPA ID</u> <u>LUST ID</u> 2010400010 921044	HWY. 251 & MCCURRY RD. ROSCOE, IL	0.975 MILES	SOUTHEAST	9893
17005006248	MATERIAL SERVICE CORP. COUNTY: WINNEBAGO <u>IEPA ID</u> <u>LUST ID</u> 2010455010 920144	4633 PRAIRIE HILL RD SOUTH BELOIT, IL 61080-2540	1.056 MILES	NORTHWEST	6248
17005001459	BRAKE REALTY COUNTY: WINNEBAGO <u>IEPA ID</u> <u>LUST ID</u> 2010455034 931802	4613 PRAIRIE HILL RD SOUTH BELOIT, IL 61080-2540	1.063 MILES	NORTHWEST	1459
17005004549	HONONEGAH MOBIL COUNTY: WINNEBAGO <u>IEPA ID</u> <u>LUST ID</u> 2010405018 921185	5213 ELEVATOR RD ROSCOE, IL 61073-9229	1.931 MILES	SOUTHEAST	4549

**ERIIS ENVIRONMENTAL DATA REPORT
ILLINOIS LAND-BASED DISPOSAL SITES
SWF - PLOTTABLE SITES - PAGE 1**

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID IL EPA ID/ US EPA ID	FACILITY/ CITY, COUNTY	OPERATOR NAME	FACILITY STATUS PERMIT STATUS	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP II
17023003252 2010400004	AAA DISPOSAL SYSTEMS INC ROSCOE, WINNEBAGO	RICHARD TERMAAT	CLOSED FINAL COVER UNPERMITTED UNAUTHORIZED	0.300 MILES	SOUTHEAST	3252
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE			
17023003254 2010400006	ERICKSON, ELDEN ROSCOE, WINNEBAGO	ELDEN ERICKSON		0.435 MILES	SOUTHEAST	3254
	<u>DISPOSAL TYPE</u> OPEN DUMP		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE			
17023003249 2010400001	BELOIT FOUNDRY CO ROSCOE, WINNEBAGO	CESINGER, JOHN R.	CLOSED FINAL COVER UNPERMITTED UNAUTHORIZED	0.590 MILES	NORTHEAST	3249
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE			
17023003250 2010400002	CHRISTENSEN, STAN ROSCOE, WINNEBAGO	CHRISTENSEN, STAN	CLOSED FINAL COVER UNPERMITTED UNAUTHORIZED	0.617 MILES	NORTHEAST	3250
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE			
17023003343 2019999999	DURGEON PIPE CO. S BELOIT, WINNEBAGO	NOT AVAILABLE	OPERATIONAL	0.665 MILES	NORTHWEST	3343
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> CONCRETE OR ASPHALT NONHAZARDOUS WASTE			

COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:S OF PRAIRIE HILL RD;W OF CNW RR TRACKS;W OF US 51.

ERHS Report #134112A

Dec 18, 1996

ERIIS ID IL EPA ID/ US EPA ID	FACILITY/ CITY, COUNTY	OPERATOR NAME	FACILITY STATUS PERMIT STATUS	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17023003401 2019999999	BEHIND STATELINE PRINTING ROSCOE TWP, WINNEBAGO	NOT AVAILABLE	CLOSED	0.690 MILES	SOUTHEAST	3401
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE			
	COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:US 51;N OF ROCKTON ROAD.					
17023003253 2010400005	KELLY SAND & GRAVEL ROSCOE, WINNEBAGO	KELLY MIKE	CLOSED FINAL COVER UNPERMITTED UNAUTHORIZED	1.058 MILES	SOUTHWEST	3253
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE			
17023003257 2010450001	BELOIT MUNICIPAL SOUTH BELOIT, WINNEBAGO	MAYOR AND COUNCIL	CLOSED FINAL COVER UNPERMITTED EXEMPT	1.129 MILES	NORTHWEST	3257
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> GENERAL SOLID WASTE NONHAZARDOUS WASTE			
17023003330 2019999999	VILLAGE OF ROSCOE ROSCOE, WINNEBAGO	NOT AVAILABLE	CLOSED	1.554 MILES	SOUTHEAST	3330
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE			
	COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:N OF ELEVATOR RD AT RR TRACKS;BY WILLOW BROOK.					
17023003333 2019999999	BEHIND PEABODY WELLS ROSCOE, WINNEBAGO	NOT AVAILABLE	OPERATIONAL	1.554 MILES	SOUTHEAST	3333
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> LANDSCAPING DEBRIS NONHAZARDOUS WASTE			
	COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:E OF N 2ND ST FRONTAGE RD;N OF HONONEGAH ROAD.					

(

Dec 18, 1996

ERIIS ID IL EPA ID/ US EPA ID	FACILITY/ CITY, COUNTY	OPERATOR NAME	FACILITY STATUS PERMIT STATUS	DISTANCE FROM SITE	DIRECTION FROM SITE	MAP ID
17023003329 2019999999	CNW RAILROAD CO ROSCOE, WINNEBAGO	NOT AVAILABLE		1.569 MILES	NORTHWEST	3329
	<u>DISPOSAL TYPE</u> OPEN DUMP		<u>WASTE TYPE</u> NONHAZARDOUS WASTE			
	COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:RAILROAD R-O-W NEXT TO IL-WISC SAND & GRAVEL CO.					
17023003340 2019999999	PEARL LAKE S BELOIT, WINNEBAGO	NOT AVAILABLE	CLOSED	1.569 MILES	NORTHWEST	3340
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE			
	COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:N END OF LAKE;W OF US 51;S OF GARDNER STREET.					
17023003341 2019999999	INTERPACE PIPE CO S BELOIT, WINNEBAGO	NOT AVAILABLE	OPERATIONAL	1.569 MILES	NORTHWEST	3341
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> CONCRETE OR ASPHALT NONHAZARDOUS WASTE UNKNOWN WASTE			
	COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:QUARRY;W OF CNW RR;SE LAKE VICTORIA;N PRAIRIEHILLRD					
17023003342 2019999999	SOUTH BELOIT CITY PK S BELOIT, WINNEBAGO	NOT AVAILABLE	OPERATIONAL	1.569 MILES	NORTHWEST	3342
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> CONCRETE OR ASPHALT NONHAZARDOUS WASTE			
	COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:QUARRY;SW OF EASTERN AVE;E OF S BELOIT PARK.					
17023003399 2019999999	RYKISKI ROCKTON TWP, WINNEBAGO	NOT AVAILABLE	CURRENT	1.570 MILES	SOUTHWEST	3399
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> GENERAL SOLID WASTE NONHAZARDOUS WASTE			
	COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT'81. LOCATED:W OF DORR RD;S OF ROCKTON ROAD-DUMPING ON GROUND NOW					

**ERIIS ENVIRONMENTAL DATA REPORT
ILLINOIS UNDERGROUND STORAGE TANKS
RST - PLOTTABLE SITES - PAGE 1**

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID FACILITY ID	FACILITY	ADDRESS	CONTACT	NUMBER OF TANKS	STATUS	MAP II
17010032318 1-003643	SHIPLER CONST CO INC DISTANCE FROM SITE: 0.017 MILES DIRECTION FROM SITE: NORTHWEST	4968 E ROCKTON RD ROSCOE, IL 61073-8994 COUNTY: WINNEBAGO	SHIPLER DENNIS 815-389-0900	3	ACTIVE	2318
17010032311 1-030076	MAKERITE MFG CO DISTANCE FROM SITE: 0.277 MILES DIRECTION FROM SITE: NORTHEAST	13671 METRIC RD ROSCOE, IL 61073-9712 COUNTY: WINNEBAGO	BURKE PAUL JR 815-389-3902	0	CLOSED	2311
17010032338 1-013008	CLELAND VICKI DISTANCE FROM SITE: 0.314 MILES DIRECTION FROM SITE: NORTHWEST	13850 DEARBORN AVE SOUTH BELOIT, IL 61080-9472 COUNTY: WINNEBAGO	MONTGOMERY NORM 815-389-1982	1	ACTIVE	2338
17010032320 1-009334	WASTE MANAGEMENT OF WISCONSIN DISTANCE FROM SITE: 0.382 MILES DIRECTION FROM SITE: SOUTHEAST	13125 N 2ND ST ROSCOE, IL 61073-8227 COUNTY: WINNEBAGO	KAPPEL WM A 815-228-9803	5	ACTIVE	2320
17010032356 1-024843	ST MARYS PEERLESS CEMENT CO DISTANCE FROM SITE: 0.418 MILES DIRECTION FROM SITE: NORTHWEST	13700 DEARBORN AVE SOUTH BELOIT, IL 61080-9471 COUNTY: WINNEBAGO	RUEHL PAUL 313-842-4600	0	CLOSED	2356
17010032303 1-013943	ELECTRO CAM CORPORATION DISTANCE FROM SITE: 0.575 MILES DIRECTION FROM SITE: NORTHEAST	13701 METRIC RD ROSCOE, IL 61073-7639 COUNTY: WINNEBAGO	STRAW JOHN 815-389-2620	0	CLOSED	2303
17010032301 1-029544	DANA CORP DISTANCE FROM SITE: 1.012 MILES DIRECTION FROM SITE: SOUTHEAST	5253 MCCURRY RD ROSCOE, IL 61073-9552 COUNTY: WINNEBAGO	HANSEN JIM 815-389-4300	0	CLOSED	2301
17010032349 1-020242	MATERIAL SERVICE CORP DISTANCE FROM SITE: 1.056 MILES DIRECTION FROM SITE: NORTHWEST	4633 PRAIRIE HILL RD SOUTH BELOIT, IL 61080-2540 COUNTY: WINNEBAGO	WIEMAN DALE 815-389-3983	4	ACTIVE	2349
17010032336 1-031739	BRAKE REALTY AND CUSTOM BUILDERS INC DISTANCE FROM SITE: 1.063 MILES DIRECTION FROM SITE: NORTHWEST	4613 PRAIRIE HILL RD SOUTH BELOIT, IL 61080-2540 COUNTY: WINNEBAGO	BRANKE ORAL WAYNE 815-623-7101	1	ACTOVE	2336
17010032342 1-018301	GHA LOCK JOINT INC DISTANCE FROM SITE: 1.150 MILES DIRECTION FROM SITE: NORTHWEST	4416 PRAIRIE HILL RD SOUTH BELOIT, IL 61080-2545 COUNTY: WINNEBAGO	BUSS GARY L SR 815-389-4800	2	ACTIVE	2342
17010032305 1-022402	FAIRBANKS MORSE ENGINE ACCES OPR DISTANCE FROM SITE: 1.306 MILES DIRECTION FROM SITE: NORTHEAST	6402 E ROCKTON RD ROSCOE, IL 61073-8812 COUNTY: WINNEBAGO	JONES GARRETT M 815-389-4915	1	ACTIVE	2305
17010032298 1-032490	WINNEBAGO CO FOREST PRESERVE DIST DISTANCE FROM SITE: 1.473 MILES DIRECTION FROM SITE: SOUTHWEST	80 HONONEGAH RD ROCKTON, IL 61072-3008 COUNTY: WINNEBAGO	MCGONIGAL LARRY 815-624-2588	1	ACTIVE	2298
17010032350 1-033652	PRAIRIE HILL COMM CSD 133 DISTANCE FROM SITE: 1.567 MILES DIRECTION FROM SITE: NORTHEAST	14714 WILLOW BROOK RD SOUTH BELOIT, IL 61080-9564 COUNTY: WINNEBAGO	FINLEN JOHN M 815-389-2791	1	ACTIVE	2350

ERIS ENVIRONMENTAL DATA REPORT
ILLINOIS UNDERGROUND STORAGE TANKS
RST - PLOTTABLE SITES - PAGE 2

ERIS Report #134112A

Dec 18, 1996

ERIS ID FACILITY ID	FACILITY	ADDRESS	CONTACT	NUMBER OF TANKS	STATUS	MAP II
17010032300 1-033095	CHARLES LAGRENE DISTANCE FROM SITE: 1.894 MILES DIRECTION FROM SITE: SOUTHEAST	11811 MAIN ST ROSCOE, IL 61073-9587 COUNTY: WINNEBAGO	LAGRENE CHUCK 815-623-8566	0	EXEMPT	2300
17010032309 1-018392	KELLEY WILLIAMSON COMPANY DISTANCE FROM SITE: 1.831 MILES DIRECTION FROM SITE: SOUTHEAST	5213 ELEVATOR RD ROSCOE, IL 61073-9229 COUNTY: WINNEBAGO	GRIFFIN JOHN 815-397-9410	3	ACTIVE	2309

Unplottable Sites

The remaining report pages list additional environmental sites that have been selected based on geographic criteria unique to your study site. They are classified as "unplottable sites" and require further investigation to assess their potential impact on your site.

How to Evaluate Unplottable Sites

Step 1

Streets Within the Radius: the following page is an alphabetical index of all streets that intersect or are contained within the largest study radius (usually one mile).

Step 2

Cross-Reference: use the "Streets Within the Radius" index to cross-reference the unplottable sites. For example, if Maple Avenue and Oak Avenue are listed in the street index, then any unplottable sites with a Maple Avenue or Oak Avenue address should be checked for possible impact on study site.

Questions on ERIIS' Proprietary Geocoding?

We're happy to answer any questions you might have about our data processing and **point-geocoding** (assigning a latitude and longitude to each address). Just give us a call on our toll-free number at (800) 989-0402 and let us know what state you're calling from. Our customer service staff is available from 8 a.m. to 8 p.m. (EST).

The ASTM Standard Practice For Environmental Site Assessments

As stated in the recently published **Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527)** by the American Society for Testing and Materials (ASTM):

"For large databases with numerous facility records (such as RCRA hazardous waste generators and registered underground storage tanks), the records are not practically reviewable unless they can be obtained from the source agency in the smaller geographic area of ZIP code (3.3.24)."

Therefore, this Report contains information available by latitude/longitude or by ZIP code. If your research requires environmental records for which only city or county information is available (i.e., no valid street or ZIP code) ERIIS will include this data at no extra charge.

ERIIS LIST OF STREETS IN THE RADIUS

ERIIS Report #134112A

Dec 18, 1996

STREET NAME

Abe Trl
 Adele St
 Aldrin Road
 Allen St
 Ambush Trl
 Annapolis Road
 Annulet Dr
 Arena Dr
 Armstrong Ave
 Aspland Dr
 Balsa Lane
 Barbara Lane
 Beecher Dr
 Bellmawr Lane
 Bend River Road
 Betsy Ross Lane
 Blue Spruce Dr
 Bunn Dr
 Burnside Lane
 Cassidy Dr
 Caswell St
 Cedarbrook Road
 Chevron Ct
 Clayton Cir
 Collins Dr
 Commercial Pkwy
 Cork Road
 County Hwy 8
 County Hwy 9
 Crown Point Road
 Dancette Dr
 De la Tour Dr
 Dearborn Ave
 Degroff St
 Dewey Road
 Doreen Dr
 Doris Dr
 Dorr Road
 Duncan Lane
 Echo Dr
 Edgemere Ter
 Edith Lane
 Elevator Road
 Equine Dr
 Fairfax Road
 Fox Ct
 Frances Lane
 Fulmar Dr
 Gloucester Road
 Graystone Cir
 Gridley Lane
 Hayloft Ct
 Hodges Lane
 Honey Locust Lane
 Hononegah Road
 Hugh Dr
 Huntsboro Lane
 I- 90
 Industrial Pkwy
 Joan Dr
 John Dr
 Kennedy Dr
 Krotz Dr
 Kutzke Pkwy
 Lang Dr
 Lee Ash Lane
 Lejeune Lane
 Leo Lane
 Liston Ave
 Love Road
 Lozenge Dr
 Lynnhurst Lane
 Mack Trl
 Main St
 Mathews Ave
 Mc Curry Road
 Metric Road
 Meyer Ct
 Mockingbird Lane
 Montclair Road
 Nautical Ct
 Northland Estates Ct
 Oakland Ave
 Oatseed Trl
 Owen Trl
 Palmer Road
 Park Ave
 Patriots Way
 Patriots Cise
 Pfister Lane
 Portsmouth Lane
 Prairie Hill Road
 Progressive Lane
 Quail Trl
 Quality Lane
 Quantico Dr
 Rae Ann Road
 Ramp
 Randall Ct
 Ravine St
 Rockton Road

ERIIS LIST OF STREETS IN THE RADIUS

ERIIS Report #134112A

Dec 18, 1996

STREET NAME

Rollingsford Lane
 Roscoe Ave
 Ross Lane
 Rustlers Row
 Saddle Club Dr
 Sandhurst Dr
 Sandpebble Dr
 Sheppard Road
 Smith Lane
 Stamford Lane
 State Hwy 251
 Straw Lane
 Sundance Trl
 Sunrise Dr
 Surf Trl
 Talcott Dr
 Timothy Turn
 Tourtelotte Trl
 Tresemer Road
 Valerie Road
 Valley Forge Trl
 Vesper Dr
 Vivian Ct
 Wagon Lane
 Wagon Lane Ct
 Waltham Road
 Waterboro Lane
 Whittemore Dr
 Wild Deer Trl
 Willow Brook Road
 Wilmington Cise
 Winchester Lane

ERIS SUMMARY OF UNPLOTTABLE SITES
(Facilities sorted alphabetically within ZIP Code)

RIIS Report #134112A

Dec 18, 1996

ERIS ID.	FACILITY/STREET	CITY/STATE/ZIP/COUNTY	DATABASE
17007000750	BELOIT CORP HWY 2	SOUTH BELOIT, IL 61080 COUNTY: WINNEBAGO	RCRIS_LG
17008012313	BOUVERAT INDS AMERICAN LTD 16050 WOOD MINT LN	SOUTH BELOIT, IL 61080-9588 COUNTY: WINNEBAGO	RCRIS_SG
17008012167	CORDIAL COURT LOT 3B CORDIAL COURT	SOUTH BELOIT, IL 61080 COUNTY: WINNEBAGO	RCRIS_SG
17009000986	ECOLAB INC. HWY. 251 & ROCKTON RD.	SOUTH BELOIT, IL 61080 COUNTY: WINNEBAGO	TRI
17008000836	ECOLAB INC HWY 251 AND ROCKTON RD	SOUTH BELOIT, IL 61080 COUNTY: WINNEBAGO	RCRIS_SG
17008005620	METCALF AND EDDY INC 190 AND TOLL PLAZA ONE	SOUTH BELOIT, IL 61080 COUNTY: WINNEBAGO	RCRIS_SG
17007000749	REGAL BELOIT CORP 5330 5404 E ROCKTON RD	SOUTH BELOIT, IL 61080 COUNTY: WINNEBAGO	RCRIS_LG
17010032363	UNITED TOOL & ENG CO PO BOX 218	SOUTH BELOIT, IL 61080-0218 COUNTY: WINNEBAGO	RST
170001872	611 QUALITY LANE	SOUTH BELOIT, IL 61080-2609 COUNTY: WINNEBAGO	ERNS_ALL
17023003256	AAA DISPOSAL SYSTEMS	ROSCOE, IL COUNTY: WINNEBAGO	SWF
17023003264	CHICAGO AND NORTHWESTERN R.R.	SOUTH BELOIT, IL COUNTY: WINNEBAGO	SWF
17023003410	FOSTER FARM	ROCKTON TWP, IL COUNTY: WINNEBAGO	SWF
17023003262	FRED RYKOWSKI	SOUTH BELOIT, IL COUNTY: WINNEBAGO	SWF
17023003261	GHA LOCK JOINT (CRETEX PIPE)	SOUTH BELOIT, IL COUNTY: WINNEBAGO	SWF
17023003248	GROUNDWATER CONTAM'N INCIDENT	ROCKTON, IL COUNTY: WINNEBAGO	SWF
003277	MCCLEARY INDUSTRIES INC	SOUTH BELOIT, IL COUNTY: WINNEBAGO	SWF
17023003275	REGAL-BELOIT CORP.	SOUTH BELOIT, IL COUNTY: WINNEBAGO	SWF
17023003276	REGAL-BELOIT CORPORATION	SOUTH BELOIT, IL COUNTY: WINNEBAGO	SWF
17023003267	SOUTH BELOIT MUNICIPAL	SOUTH BELOIT, IL COUNTY: WINNEBAGO	SWF

ERIIS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
RCRIS_LG - UNPLOTTABLE SITES

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID EPA ID	FACILITY	ADDRESS	RAATS ISSUE DATE RAATS ACTION/STATUS RAATS PENALTIES
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17007000749 ILD006111751	REGAL BELOIT CORP COUNTY: WINNEBAGO	5330 5404 E ROCTON RD SOUTH BELOIT, IL 61080	FACILITY NOT REPORTED IN RAATS
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HAZARDOUS WASTES

	WASTE CODE: -----	AMOUNT OF WASTE: -----	SOURCE OF INFO: -----
1.	D001	.00000	NOTIFICATION
2.	U032	.00000	NOTIFICATION
3.	U226	.00000	NOTIFICATION

17007000750 ILD006114086	BELOIT CORP COUNTY: WINNEBAGO	HWY 2 SOUTH BELOIT, IL 61080	FACILITY NOT REPORTED IN RAATS
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FACILITY VIOLATIONS

	DATE DETERMINED: -----	DATE RESOLVED: -----	AREA OF VIOLATION: -----
1.	06/13/86	12/02/87	GENERATOR-ALL REQUIREMENTS
2.	06/13/86	07/26/86	GENERATOR-ALL REQUIREMENTS

FACILITY EVALUATIONS

	EVALUATION DATE: -----	EVALUATION AGENCY: -----	TYPE OF EVALUATION: -----	AREA(S) OF EVALUATION: -----
1.	06/13/86	STATE	NON-FINANCIAL RECORD REVIEW	GENERATOR-ALL REQUIREMENTS

FACILITY ENFORCEMENTS

	ENFORCEMENT DATE: -----	ENFORCEMENT AGENCY: -----	TYPE OF ACTION: -----	PENALTY(S): -----
1.	06/24/1986	STATE	WRITTEN, INFORMAL ADMINISTRATIVE ACTION	

ERIS ENVIRONMENTAL DATA REPORT
RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM
RCRIS_SG - UNPLOTTABLE SITES

ERIS Report #134112A

Dec 18, 1996

ERIS ID EPA ID	FACILITY	ADDRESS	RAATS ISSUE DATE RAATS ACTION/STATUS RAATS PENALTIES
17008000836 ILD006216386	ECOLAB INC COUNTY: WINNEBAGO	HWY 251 AND ROCKTON RD SOUTH BELOIT, IL 61080	FACILITY NOT REPORTED IN RAATS

FACILITY VIOLATIONS

	DATE DETERMINED: -----	DATE RESOLVED: -----	AREA OF VIOLATION: -----
1.	01/07/88	04/26/88	GENERATOR-ALL REQUIREMENTS

FACILITY EVALUATIONS

	EVALUATION DATE: -----	EVALUATION AGENCY: -----	TYPE OF EVALUATION: -----	AREA(S) OF EVALUATION: -----
1.	01/07/88	STATE	COMPLIANCE EVALUATION INSPECTION	GENERATOR-ALL REQUIREMENTS

FACILITY ENFORCEMENTS

	ENFORCEMENT DATE: -----	ENFORCEMENT AGENCY: -----	TYPE OF ACTION: -----	PENALTY(S): -----
1.	02/24/1988	STATE	WRITTEN, INFORMAL ADMINISTRATIVE ACTION	

HAZARDOUS WASTES

	WASTE CODE: -----	AMOUNT OF WASTE: -----	SOURCE OF INFO: -----
1.	D000	.00000	NOTIFICATION
2.	D001	.00000	NOTIFICATION
3.	D002	.00000	NOTIFICATION
4.	D006	.00000	NOTIFICATION
5.	D007	.00000	NOTIFICATION
6.	D008	.00000	NOTIFICATION
7.	F001	.00000	NOTIFICATION
8.	F003	.00000	NOTIFICATION
9.	F005	.00000	NOTIFICATION
10.	F017	.00000	NOTIFICATION

17008005620 ILD984766733	METCALF AND EDDY INC COUNTY: WINNEBAGO	190 AND TOLL PLAZA ONE SOUTH BELOIT, IL 61080	FACILITY NOT REPORTED IN RAATS
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HAZARDOUS WASTES

	WASTE CODE: -----	AMOUNT OF WASTE: -----	SOURCE OF INFO: -----
1.	F001	.00000	NOTIFICATION
2.	F002	.00000	NOTIFICATION

17008012167 ILR000016998	CORDIAL COURT COUNTY: WINNEBAGO	LOT 38 CORDIAL COURT SOUTH BELOIT, IL 61080	FACILITY NOT REPORTED IN RAATS
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**ERIIS ENVIRONMENTAL DATA REPORT
TOXIC RELEASE INVENTORY SYSTEM
TRI - UNPLOTTABLE SITES**

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID EPA ID	FACILITY FACILITY ID	ADDRESS	COUNTY	SIC CODE	CONTACT PHONE
17009000986 ILD006216386	ECOLAB INC. 61080CLBNCHWY25	HWY. 251 & ROCKTON RD. SOUTH BELOIT, IL 61080	WINNEBAGO	3561	DARRELL AARTHUN (815) 389-0618

CHEMICAL	RELEASES (LBS.) TRANSFERS (LBS.)					TOTAL	POTW	OFF-SITE	TOTAL
	FUGITIVE AIR	STACK AIR	WATER	UNDER INJECTION	LAND				
NICKEL COMPOUNDS	5	5	0	0	0	10	0	210	210
CHROMIUM COMPOUNDS	5	F	0	0	0	10	0	400	400

ERIIS ENVIRONMENTAL DATA REPORT
ILLINOIS LAND-BASED DISPOSAL SITES
SWF - UNPLOTTABLE SITES

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID IL EPA ID/ US EPA ID	FACILITY/ CITY, COUNTY	OPERATOR NAME	FACILITY STATUS PERMIT STATUS
17023003248 2010350003	GROUNDWATER CONTAM'N INCIDENT ROCKTON, WINNEBAGO	GROUNDWATER CONTAM'N INCIDENT	
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> HAZARDOUS SOLID WASTE
17023003410 2019999999	FOSTER FARM ROCKTON TWP, WINNEBAGO	NOT AVAILABLE	
	<u>DISPOSAL TYPE</u> LAND APPLICATION		<u>WASTE TYPE</u> MUNICIPAL SEWAGE SLUDGE NONHAZARDOUS WASTE
COMMENTS: FROM:RKFD-WINN CTY PLANNING COMM DISPOSAL INVENTORY OCT '81. LOCATED:NOT MAPPED.			
17023003256 2010400008	AAA DISPOSAL SYSTEMS ROSCOE, WINNEBAGO	AAA DISPOSAL SYSTMS	OPERATIONAL UNPERMITTED EXEMPT
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE
17023003261 2010450005	GHA LOCK JOINT (CRETEX PIPE) SOUTH BELOIT, WINNEBAGO	GHA LOCK JOINT	OPERATIONAL UNPERMITTED UNAUTHORIZED
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> CONCRETE OR ASPHALT NONHAZARDOUS WASTE UNKNOWN WASTE
COMMENTS: ONSITE INV:CONCRETE PIPE-550 TONS/YR			
17023003262 2010450006	FRED RYKOWSKI SOUTH BELOIT, WINNEBAGO	MR. FRED RYKOWSKI	
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE

ERIIS ENVIRONMENTAL DATA REPORT
ILLINOIS LAND-BASED DISPOSAL SITES
SWF - UNPLOTTABLE SITES

ERIIS Report #134112A

Dec 18, 1996

ERIIS ID IL EPA ID/ US EPA ID	FACILITY/ CITY, COUNTY	OPERATOR NAME	FACILITY STATUS PERMIT STATUS
17023003264 2010450008	CHICAGO AND NORTHWESTERN R.R. SOUTH BELOIT, WINNEBAGO	C.N.W.R.R.	
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE UNKNOWN WASTE
17023003267 2010450011	SOUTH BELOIT MUNICIPAL SOUTH BELOIT, WINNEBAGO	CITY OF S. BELOIT	
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE
17023003275 2010450021	REGAL-BELOIT CORP. SOUTH BELOIT, WINNEBAGO	REGAL-BELOIT CORP.	CLOSED FINAL COVER UNPERMITTED UNAUTHORIZED
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> MUNICIPAL SEWAGE SLUDGE INDUSTRIAL HAZARDOUS SOLID WASTE HAZARDOUS LIQUID WASTE
COMMENTS: METHOD OF DISPOSAL "UNDERGROUND INJECTION WELL".			
17023003276 2010450021	REGAL-BELOIT CORPORATION SOUTH BELOIT, WINNEBAGO	REGAL-BELOIT CORP	
	<u>DISPOSAL TYPE</u> LANDFILL		<u>WASTE TYPE</u> NONHAZARDOUS WASTE
COMMENTS: STATUS OF CLEANING "UNCLASSIFIED".			
17023003277 2010450026	MCCLEARY INDUSTRIES INC SOUTH BELOIT, WINNEBAGO	MCCLEARY INDUSTRIES INC	OPERATIONAL PERMITTED
	<u>DISPOSAL TYPE</u> LAND APPLICATION		<u>WASTE TYPE</u> NONHAZARDOUS WASTE

B

APPENDIX B

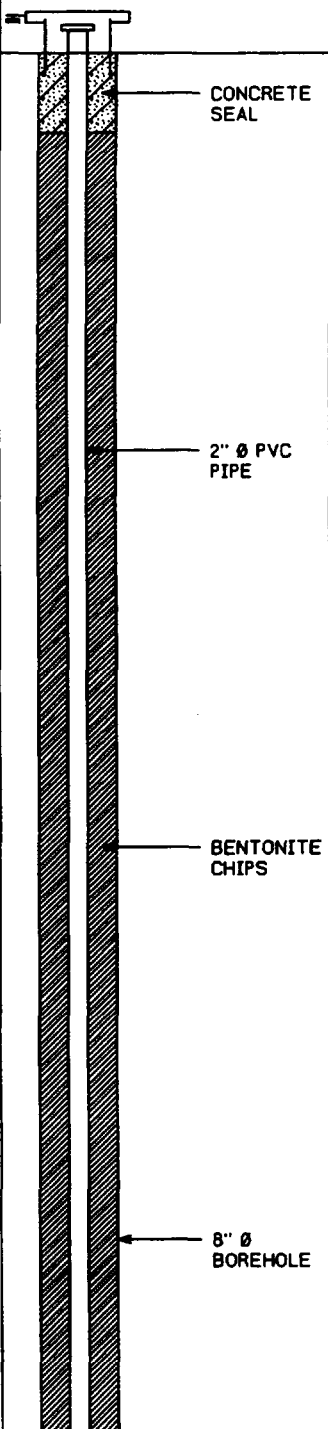
STRATIGRAPHIC AND INSTRUMENTATION LOGS FOR CRA PIEZOMETERS AND MONITORING WELLS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-01)
Page 1 of 2

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: P-1
DATE COMPLETED: NOVEMBER 19, 1996
DRILLING METHOD: 4 1/4" HSA
CRA SUPERVISOR: P. KLICK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PID (ppm)
	REFERENCE POINT (Top of Riser) GROUND SURFACE	772.95 770.8					
2.5	Grass, roots, topsoil with clay and sand SW-SAND, trace coarse sand and gravel, fine to medium grained, medium dense to dense, light brown, dry	770.1					
5.0				1SS	X	25	0
7.5							
10.0	- trace coarse gravel			2SS	X	82	0
12.5							
15.0				3SS	X	76	0.2
17.5							
20.0	- little fine to coarse gravel			4SS	X	52	1.4
22.5							
25.0	- moist			5SS	X	46	0
27.5							
30.0	- trace fine gravel			6SS	X	47	1.1
32.5							

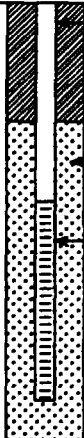
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-01)
Page 2 of 2

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: P-1
DATE COMPLETED: NOVEMBER 19, 1996
DRILLING METHOD: 4 X" HSA
CRA SUPERVISOR: P. KLINK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PID (ppm)
37.5	SP-SAND, trace coarse sand, fine grained, dense, light brown, moist	734.6	 <p>2" Ø PVC PIPE BENTONITE CHIPS SAND PACK WELL SCREEN 8" Ø BOREHOLE</p>	7SS	X	38	0.6
40.0	- trace fine gravel, brown, saturated						
42.5							
45.0				8SS	X	23	0
47.5	END OF HOLE @ 46ft BGS	724.6					
50.0			<p>SCREEN DETAILS Screened Interval: 40 to 45ft BGS Length: 5.0ft Diameter: 2" Slot Size: #10 Material: PVC Sand Pack: 38 to 46ft BGS Material: #30 Sand</p>				
52.5							
55.0							
57.5							
60.0							
62.5							
65.0							
67.5							

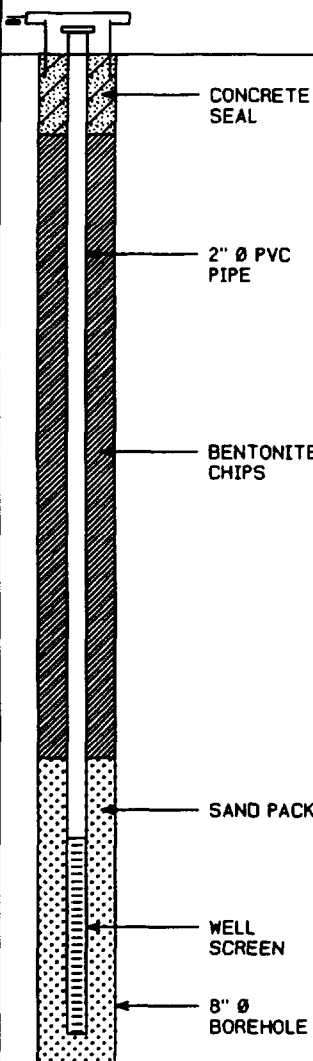
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-02)
Page 1 of 1

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: P-2
DATE COMPLETED: NOVEMBER 19, 1996
DRILLING METHOD: 4 1/2" HSA
CRA SUPERVISOR: P. KLICK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PID (ppm)
	REFERENCE POINT (Top of Riser) GROUND SURFACE	749.81 747.8	 <p>CONCRETE SEAL</p> <p>2" Ø PVC PIPE</p> <p>BENTONITE CHIPS</p> <p>SAND PACK</p> <p>WELL SCREEN</p> <p>8" Ø BOREHOLE</p>				
	Grass, roots, weeds	747.3					
	SC-SAND, some clay, trace fine gravel, fine to medium grained, orange brown, moist	745.8					
-2.5	SW-SAND, trace coarse fine sand and fine to coarse gravel, medium dense, light brown, slightly moist						
-5.0				ISS	X	16	0
-7.5							
-10.0	- little coarse sand and fine gravel, dry			2SS	X	43	0.3
-12.5							
-15.0	SP-SAND, trace coarse sand and fine gravel, fine grained, medium dense, light brown, moist	732.8		3SS	X	25	0
-17.5							
-20.0	- saturated		<p>SCREEN DETAILS</p> <p>Screened Interval: 19.7 to 24.7t BGS</p> <p>Length: 5.0ft</p> <p>Diameter: 2"</p> <p>Slot Size: #10</p> <p>Material: PVC</p> <p>Sand Pack: 17.7 to 25.5ft BGS</p> <p>Material: #30 Sand</p>	4SS	X	24	0
-22.5							
-25.0	END OF HOLE @ 25.5ft BGS	722.3					
-27.5							
-30.0							
-32.5							


NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-03)
Page 1 of 2

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: MW-1
DATE COMPLETED: DECEMBER 3, 1996
DRILLING METHOD: 4 1/2" HSA
CRA SUPERVISOR: P. KLINK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PID (ppm)
2.5	Grass, roots, black topsoil with clay and sand SW-SAND, trace clay and fine to coarse gravel, fine to coarse grained, loose, brown, moist		 <p>CONCRETE SEAL</p> <p>2" Ø STAINLESS STEEL PIPE</p> <p>BENTONITE CHIPS</p> <p>8" Ø BOREHOLE</p>				
5.0				1SS	X	7	7.5
7.5							
10.0	- no recovery			2SS	X	8	NR
12.5							
15.0	- no clay, light brown			3SS	X	9	18.5
17.5							
20.0	SP-SAND, trace fine gravel, fine grained, medium dense, light brown, moist			4SS	X	17	8.6
22.5							
25.0	SW-SAND, trace fine to coarse gravel, fine to coarse grained, very loose to medium dense, light brown, wet			5SS	X	2	15.3
27.5							
30.0				6SS	X	15	52.
32.5							

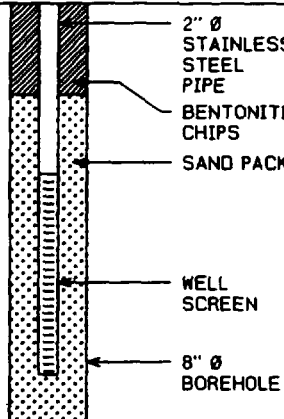
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-03)
Page 2 of 2

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: MW-1
DATE COMPLETED: DECEMBER 3, 1996
DRILLING METHOD: 4 1/4" HSA
CRA SUPERVISOR: P. KLICK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PID (ppm)
37.5	SP-SAND, fine grained, medium dense, light brown, wet		 <p>2" Ø STAINLESS STEEL PIPE BENTONITE CHIPS SAND PACK WELL SCREEN 8" Ø BOREHOLE</p>	7SS	X	11	17.
40.0	- trace fine gravel, very loose, saturated						
42.5				8SS	X	2	10.
45.0							
47.5							
50.0	END OF HOLE @ 45.5ft BGS Notes: NR - no recovery						
52.5							
55.0							
57.5							
60.0							
62.5							
65.0							
67.5							

SCREEN DETAILS
Screened Interval:
39.3 to 44.3ft BGS
Length: 5.0ft
Diameter: 2"
Slot Size: #10
Material: Stainless Steel
Sand Pack:
37.3 to 45.5ft BGS
Material: #30 Sand

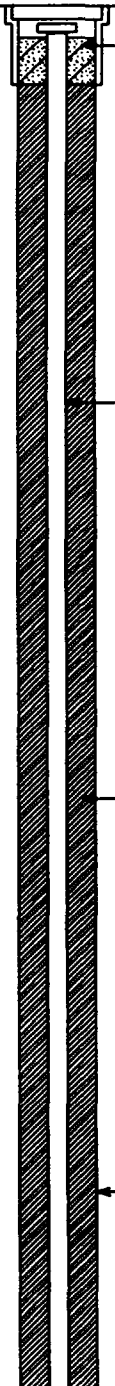
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ↓ STATIC WATER LEVEL ↓

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-04)
Page 1 of 2

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: MW-2
DATE COMPLETED: DECEMBER 2, 1996
DRILLING METHOD: 4 1/2" HSA
CRA SUPERVISOR: P. KLICK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PID (ppm)
2.5	Grass, roots, black topsoil with clay and sand SW-SAND, trace fine gravel, fine to coarse grained, medium dense, light brown, dry		 <p>CONCRETE SEAL</p> <p>2" Ø STAINLESS STEEL PIPE</p> <p>BENTONITE CHIPS</p> <p>8" Ø BOREHOLE</p>				
5.0				1SS	X	10	0.2
7.5							
10.0	- trace coarse gravel, dense to very dense			2SS	X	59	0.5
12.5							
15.0				3SS	X	42	0.6
17.5							
20.0				4SS	X	45	0.6
22.5							
25.0	SP-SAND, fine grained, medium dense, light brown			5SS	X	24	1.9
27.5							
30.0	- trace fine gravel - trace coarse sand			6SS	X	24	0.8
32.5							

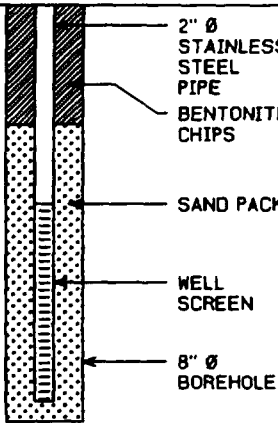
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ↓ STATIC WATER LEVEL ↓

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-04)
Page 2 of 2

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: MW-2
DATE COMPLETED: DECEMBER 2, 1996
DRILLING METHOD: 4 1/2" HSA
CRA SUPERVISOR: P. KLICK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PID (ppm)
-37.5	- loose, saturated		 <p>2" Ø STAINLESS STEEL PIPE BENTONITE CHIPS SAND PACK WELL SCREEN 8" Ø BOREHOLE</p>	7SS	X	23	0.9
-40.0							
-42.5				8SS	X	7	0.6
-45.0	END OF HOLE @ 45.5ft BGS		<p>SCREEN DETAILS Screened Interval: 40 to 45ft BGS Length: 5.0ft Diameter: 2" Slot Size: #10 Material: Stainless Steel Sand Pack: 38 to 45.5ft BGS Material: #30 Sand</p>				
-47.5							
-50.0							
-52.5							
-55.0							
-57.5							
-60.0							
-62.5							
-65.0							
-67.5							

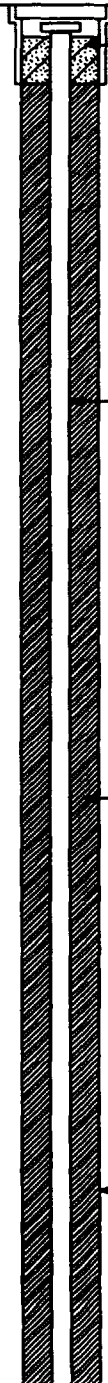
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-05)
Page 1 of 2

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: MW-3
DATE COMPLETED: DECEMBER 3, 1996
DRILLING METHOD: 4 1/2" HSA
CRA SUPERVISOR: P. KLICK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PID (ppm)
-2.5	Grass, roots, black topsoil with clay and sand SW-SAND, trace fine gravel, fine to coarse grained, medium dense TO dense, light brown, dry		 <p>CONCRETE SEAL</p> <p>2" Ø STAINLESS STEEL PIPE</p> <p>BENTONITE CHIPS</p> <p>8" Ø BOREHOLE</p>				
-5.0				1SS	X	32	0.7
-7.5							
-10.0	- no recovery, coarse gravel in cuttings			2SS	/	28	NR
-12.5							
-15.0	SP-SAND, trace fine gravel, fine grained, medium dense, light brown, dry			3SS	X	18	0.6
-17.5							
-20.0				4SS	X	18	0.4
-22.5							
-25.0	- 2" thick gravelly layer			5SS	X	10	6.5
-27.5							
-30.0	SW-SAND, fine to coarse gravel, fine to coarse grained, very dense, light brown, moist			6SS	X	51	110.
-32.5							

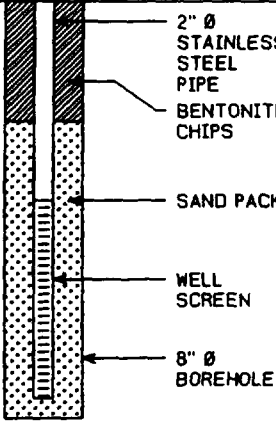
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-05)
Page 2 of 2

PROJECT NAME: EVERGREEN MANOR SITE
PROJECT NUMBER: 9234
CLIENT: ECOLAB, INC.
LOCATION: ROSCOE, ILLINOIS

HOLE DESIGNATION: MW-3
DATE COMPLETED: DECEMBER 3, 1996
DRILLING METHOD: 4 1/2" HSA
CRA SUPERVISOR: P. KLICK

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE			
				NUMBER	STATE	'N' VALUE	PIO (ppm)
37.5	SP-SAND, trace fine gravel, fine grained, dense, light brown, moist		 <p>2" Ø STAINLESS STEEL PIPE BENTONITE CHIPS SAND PACK WELL SCREEN 8" Ø BOREHOLE</p>	7SS	X	30	135.
40.0	- medium dense, saturated						
42.5				8SS	X	18	45.
45.0							
47.5	END OF HOLE @ 45.5ft BGS Notes: NR - no recovery						
50.0							
52.5							
55.0							
57.5							
60.0							
62.5							
65.0							
67.5							

SCREEN DETAILS
Screened Interval:
40 to 45ft BGS
Length: 5.0ft
Diameter: 2"
Slot Size: #10
Material: Stainless Steel
Sand Pack:
38 to 45.5ft BGS
Material: #30 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼

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APPENDIX C

1996 CHAIN-OF-CUSTODY AND CERTIFICATES OF ANALYSES/GROUNDWATER SAMPLES

TABLE C.1

**SAMPLE KEY
EVERGREEN MANOR SITE
ROSCOE, ILLINOIS**

<i>Sample Number</i>	<i>Location</i>
GW-112196-PK-001	Garage Well
GW-112196-PK-002	Garage Well Duplicate
GW-120396-PK-001	MW-1
GW-120396-PK-002	MW-1 Duplicate
GW-120396-PK-003	MW-2
GW-120396-PK-004	MW-3
GW-120496-PK-005	G114
GW-120496-PK-006	G111
GW-120496-PK-007	G103s
GW-120496-PK-008	G102s



NATIONAL
ENVIRONMENTAL
TESTING, INC.

9234
Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
Tel: (630) 289-3100
Fax: (630) 289-5445

Mr. Steve Day
CONESTOGA-ROVERS & ASSOC.
8615 West Bryn Mawr Avenue
Chicago, IL 60631

11/25/1996

NET Job Number: 96.11222

IEPA Cert. No.: 100221
WDNR Cert. No.: 999447130
A2LA Cert. No.: 0453-01

Enclosed is the Analytical and Quality Control reports for the following samples submitted to Bartlett Division of NET, Inc. for analysis.

Project Description: Ecolab

Sample Number	Sample Description	Date Taken	Date Received
385459	GW-112196-PK-001	11/21/1996	11/22/1996
385460	GW-112196-PK-002	11/21/1996	11/22/1996
385461	Trip Blank		11/22/1996

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. These results apply only to the samples analyzed. Reproduction of this report only in whole is permitted. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Procedures used follow NET Standard Operating Procedures which reference the methods listed on your report. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Approved by:

Mary Pearson
Mary Pearson
Project Manager



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Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
Tel: (630) 289-3100
Fax: (630) 289-5445

ANALYTICAL REPORT

Mr. Steve Day
CONESTOGA-ROVERS & ASSOC.
8615 West Bryn Mawr Avenue
Chicago, IL 60631

11/25/1996

Sample No. : 385459

NET Job No.: 96.11222

Sample Description: GW-112196-PK-001
Ecolab

Date Taken: 11/21/1996
Time Taken: 08:15

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
SDMA VOLATILE COMPOUNDS 524.2							
Benzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Vinyl Chloride	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Carbon Tetrachloride	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Trichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,1-Trichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
p-Dichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Dichlorobromomethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Bromoform	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chloroform	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chlorodibromomethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Surr: 4-Bromofluorobenzene	101.0		µ	80-120	11/25/1996	11j	524.2 (6)
Surr: d4-1,2-Dichlorobenzene	100.0		µ	80-120	11/25/1996	11j	524.2 (6)
Bromobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Bromomethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Chlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chloroethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Chloromethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
o-Chlorotoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
p-Chlorotoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Dibromomethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
m-Dichlorobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
o-Dichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)



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ANALYTICAL REPORT

Mr. Steve Day
CONESTOGA-ROVERS & ASSOC.
8615 West Bryn Mawr Avenue
Chicago, IL 60631

11/25/1996

Sample No. : 385459

NET Job No.: 96.11222

Sample Description: GW-112196-PK-001
Ecolab

Date Taken: 11/21/1996
Time Taken: 08:15

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
1,1-Dichloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
cis-1,2-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
trans-1,2-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Dichloromethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dichloropropane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,3-Dichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
2,2-Dichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,1-Dichloropropene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,3-Dichloropropene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Ethylbenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Styrene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,1,2-Tetrachloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,1,2,2-tetrachloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Tetrachloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Toluene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,2-Trichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2,3-Trichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
m&p-Xylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
o-Xylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dibromo-3-Chloropropane	<10		ug/L	10	11/25/1996	11j	524.2 (6)
Ethylenedibromide (EDB)	<10		ug/L	10	11/25/1996	11j	524.2 (6)
Bromochloromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
n-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
sec-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
tert-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)



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ANALYTICAL REPORT

Mr. Steve Day
CONESTOGA-ROVERS & ASSOC.
8615 West Bryn Mawr Avenue
Chicago, IL 60631

11/25/1996

Sample No. : 385459

NET Job No.: 96.11222

Sample Description: GW-112196-PK-001
Ecolab

Date Taken: 11/21/1996
Time Taken: 08:15

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
Dichlorodifluoromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Fluorotrichloromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Hexachlorobutadiene	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Isopropylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
p-Isopropyltoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Naphthalene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
n-Propylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,2,3-Trichlorobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,2,4-Trichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2,4-Trimethylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,3,5-Trimethylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)



NATIONAL
ENVIRONMENTAL
TESTING, INC.

Bartlett Division
850 West Bartlett Rd.
Bartlett, IL 60103
Tel: (630) 289-3100
Fax: (630) 289-5445

ANALYTICAL REPORT

Mr. Steve Day
CONESTOGA-ROVERS & ASSOC.
8615 West Bryn Mawr Avenue
Chicago, IL 60631

11/25/1996

Sample No. : 385460

NET Job No.: 96.11222

Sample Description: GW-112196-PK-002
Ecolab

Date Taken: 11/21/1996
Time Taken: 08:20

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
SDMA VOLATILE COMPOUNDS 524.2							
Benzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Vinyl Chloride	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Carbon Tetrachloride	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Trichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,1-Trichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
p-Dichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Dichlorobromomethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Bromoform	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chloroform	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chlorodibromomethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Surr: 4-Bromofluorobenzene	102.0		µ	80-120	11/25/1996	11j	524.2 (6)
Surr: d4-1,2-Dichlorobenzene	103.0		µ	80-120	11/25/1996	11j	524.2 (6)
Bromobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Bromomethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Chlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chloroethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Chloromethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
o-Chlorotoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
p-Chlorotoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Dibromomethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
m-Dichlorobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
o-Dichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)



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11/25/1996

Sample No. : 385460

NET Job No.: 96.11222

Sample Description: GW-112196-PK-002
Ecolab

Date Taken: 11/21/1996
Time Taken: 08:20

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
1,1-Dichloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
cis-1,2-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
trans-1,2-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Dichloromethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dichloropropane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,3-Dichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
2,2-Dichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,1-Dichloropropene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,3-Dichloropropene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Ethylbenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Styrene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,1,2-Tetrachloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,1,2,2-tetrachloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Tetrachloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Toluene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,2-Trichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2,3-Trichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
m&p-Xylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
o-Xylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dibromo-3-Chloropropane	<10		ug/L	10	11/25/1996	11j	524.2 (6)
Ethylenedibromide (EDB)	<10		ug/L	10	11/25/1996	11j	524.2 (6)
Bromochloromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
n-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
sec-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
tert-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)



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ANALYTICAL REPORT

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8615 West Bryn Mawr Avenue
Chicago, IL 60631

11/25/1996

Sample No. : 385460

NET Job No.: 96.11222

Sample Description: GW-112196-PK-002
Ecolab

Date Taken: 11/21/1996
Time Taken: 08:20

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
Dichlorodifluoromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Fluorotrichloromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Hexachlorobutadiene	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Isopropylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
p-Isopropyltoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Naphthalene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
n-Propylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,2,3-Trichlorobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,2,4-Trichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2,4-Trimethylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,3,5-Trimethylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)



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ANALYTICAL REPORT

Mr. Steve Day
CONESTOGA-ROVERS & ASSOC.
8615 West Bryn Mawr Avenue
Chicago, IL 60631

11/25/1996

Sample No. : 385461

NET Job No.: 96.11222

Sample Description: Trip Blank
Ecolab

Date Taken:
Time Taken:

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
SDWA VOLATILE COMPOUNDS 524.2							
Benzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Vinyl Chloride	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Carbon Tetrachloride	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Trichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,1-Trichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
p-Dichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Dichlorobromomethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Bromoform	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chloroform	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chlorodibromomethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Surr: 4-Bromofluorobenzene	101.0		%	80-120	11/25/1996	11j	524.2 (6)
Surr: d4-1,2-Dichlorobenzene	101.0		%	80-120	11/25/1996	11j	524.2 (6)
Bromobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Bromomethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Chlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Chloroethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Chloromethane	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
o-Chlorotoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
p-Chlorotoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Dibromomethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
m-Dichlorobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
o-Dichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)



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ANALYTICAL REPORT

Mr. Steve Day
CONESTOGA-ROVERS & ASSOC.
8615 West Bryn Mawr Avenue
Chicago, IL 60631

11/25/1996

Sample No. : 385461

NET Job No.: 96.11222

Sample Description: Trip Blank
Ecolab

Date Taken:
Time Taken:

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
1,1-Dichloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
cis-1,2-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
trans-1,2-Dichloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Dichloromethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dichloropropane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,3-Dichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
2,2-Dichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,1-Dichloropropene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,3-Dichloropropene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Ethylbenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Styrene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,1,2-Tetrachloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,1,2,2-tetrachloroethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Tetrachloroethylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
Toluene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,1,2-Trichloroethane	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2,3-Trichloropropane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
m&p-Xylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
o-Xylene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2-Dibromo-3-Chloropropane	<10		ug/L	10	11/25/1996	11j	524.2 (6)
Ethylenedibromide (EDB)	<10		ug/L	10	11/25/1996	11j	524.2 (6)
Bromochloromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
n-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
sec-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
tert-Butylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)



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11/25/1996

Sample No. : 385461

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Sample Description: Trip Blank
Ecolab

Date Taken:
Time Taken:

Date Received: 11/22/1996
Time Received: 12:00

Analyte	Result	Flag	Units	Reporting Limit	Date Analyzed	Analyst Initials	Analytical Method
Dichlorodifluoromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Fluorotrichloromethane	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Hexachlorobutadiene	<2.0		ug/L	2.0	11/25/1996	11j	524.2 (6)
Isopropylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
p-Isopropyltoluene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
Naphthalene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
n-Propylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,2,3-Trichlorobenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,2,4-Trichlorobenzene	<0.5		ug/L	0.5	11/25/1996	11j	524.2 (6)
1,2,4-Trimethylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)
1,3,5-Trimethylbenzene	<1.0		ug/L	1.0	11/25/1996	11j	524.2 (6)

NET Midwest, Bartlett Division

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	: Less than; When appearing in the results column indicates the analyte was not detected at or above the reported value.
mg/L	: Concentration in units of milligrams of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per million (ppm).
ug/g	: Concentration in units of micrograms of analyte per gram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per million (ppm) or mg/Kg.
ug/L	: Concentration in units of micrograms of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per billion (ppb).
ug/Kg	: Concentration in units of micrograms of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per billion (ppb).
TCLP	: These initials appearing in front of an analyte name indicate that the Toxicity Characteristic Leaching Procedure (TCLP) was performed for this test.
Surr:	: These initials are the abbreviation for surrogate. Surrogates are compounds that are chemically similar to the compounds of interest. They are part of the method quality control requirements.
%	: Percent; To convert ppm to %, divide the result by 10,000. To convert % to ppm, multiply the result by 10,000.
ICP	: Indicates analysis was performed using Inductively Coupled Plasma Spectroscopy.
AA	: Indicates analysis was performed using Atomic Absorption Spectroscopy.
GFAA	: Indicates analysis was performed using Graphite Furnace Atomic Absorption Spectroscopy.
PQL	: Practical Quantitation Limit; the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Method References

- (1) Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986.
- (2) ASTM "American Society for Testing Materials"
- (3) Methods 100 through 499: see "Methods for Chemical Analysis of Water and Wastes", USEPA, 600/4-79-020, Rev. 1983.
- (4) See "Standard Methods for the Examination of Water and Wastewater", 17th Ed, APHA, 1989.
- (5) Methods 600 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants", USEPA Federal Register Vol. 49 No. 209, October 1984.
- (6) Methods 500 through 599: see "Methods for the Determination of Organic Compounds in Drinking Water," USEPA 600/4-88/039, Rev. 1988.
- (7) See "Methods for the Determination of Metals in Environmental Samples", Supplement I EPA-600/R-94/111, May 1994.
- (8) See "Standard Methods for the Examination of Water and Wastewater", 18th Ed., APHA, 1992.

CRACONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933SHIPPED TO (Laboratory Name): NET

REFERENCE NUMBER:

9234PROJECT NAME: Ecolab**CHAIN OF CUSTODY RECORD**SAMPLER'S
SIGNATURE:Pat KlickPRINTED
NAME:Pat Klick

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. CONT.											REMARKS
1	11/21/96	8:15	GW-112196-PK-001	Water	4	✓										Results
2	11/21/96	8:20	GW-112196-PK-002	↓	4	✓										due
			Trip Blank		1	✓										Monday 11-25-96

TOTAL NUMBER OF CONTAINERS 9

RELINQUISHED BY:

①

Pat KlickDATE: 11-21-96TIME: 1200

RECEIVED BY:

②

RELINQUISHED BY:

②

DATE:

TIME:

RECEIVED BY:

③

RELINQUISHED BY:

③

DATE:

TIME:

RECEIVED BY:

④

DATE:

TIME:

DATE:

TIME:

DATE:

TIME:

METHOD OF SHIPMENT: Fed XAIR BILL No. 0941542766

White

-Fully Executed Copy

Yellow

-Receiving Laboratory Copy

Pink

-Shipper Copy

Goldenrod

-Sampler Copy

SAMPLE TEAM:

Klick

RECEIVED FOR LABORATORY BY:

Mary Fears

2184

DATE: 11/22/96 TIME: 12:00



12/17/96

DEC 23 1996

RECEIVED

Technical Report for

Conestoga-Rovers & Associates

Ecolab

9234

Accutest Job Number: E16738

Report to:

**Conestoga-Rovers & Associates
8615 West Bryn Mawr Avenue
Chicago, IL 60631**

ATTN: Steve Day

Total number of pages in report: 30

**Vincent J. Pugliese
President**

New Jersey Certification No. 12129

Results relate only to the items tested.

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Sample Summary

Conestoga-Rovers & Associates

Date: 12/17/96

Job No: E16738

Ecolab

Project No: 9234

Sample Number	Collected Date	Time	By	Received	Matrix Code Type	Client Sample ID
E16738-1	12/03/96	15:40	PK	12/05/96	AQ Ground Water	GW-120396-PK-001
E16738-2	12/03/96	15:55	PK	12/05/96	AQ Ground Water	GW-120396-PK-002
E16738-3	12/03/96	16:45	PK	12/05/96	AQ Ground Water	GW-120396-PK-003
E16738-4	12/03/96	17:25	PK	12/05/96	AQ Ground Water	GW-120396-PK-004
E16738-5	12/04/96	11:25	PK	12/05/96	AQ Ground Water	GW-120496-PK-005
E16738-6	12/04/96	12:05	PK	12/05/96	AQ Ground Water	GW-120496-PK-006
E16738-7	12/04/96	12:40	PK	12/05/96	AQ Ground Water	GW-120496-PK-007
E16738-8	12/02/96	17:30	PK	12/05/96	AQ Ground Water	TRIP BLANK
E16738-9	12/04/96	13:15	PK	12/05/96	AQ Ground Water	GW-120496-PK-008



Report of Analysis

Page 1 of 2

Client Sample ID: GW-120396-PK-001
Lab Sample ID: E16738-1
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/03/96
Date Received: 12/05/96
Percent Solids: n/a

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	J9157.D	1	12/05/96	GTT	n/a	n/a	VJ474

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

2

ND = Not detected

RDL = Reported Detection Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates that analyte is found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120396-PK-001
Lab Sample ID: E16738-1
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/03/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9157.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		86-118%
2037-26-5	Toluene-D8	103%		88-110%
460-00-4	4-Bromofluorobenzene	91%		86-115%

3

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120396-PK-002
Lab Sample ID: E16738-2
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/03/96
Date Received: 12/05/96
Percent Solids: n/a

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	J9158.D	1	12/05/96	GTT	n/a	n/a	VJ474

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

4

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120396-PK-002
Lab Sample ID: E16738-2
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/03/96
Date Received: 12/05/96
Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9158.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		86-118%
2037-26-5	Toluene-D8	101%		88-110%
460-00-4	4-Bromofluorobenzene	98%		86-115%

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ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120396-PK-003
Lab Sample ID: E16738-3
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/03/96
Date Received: 12/05/96
Percent Solids: n/a

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9159.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	0.73	0.62	ug/l	

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ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120396-PK-003
Lab Sample ID: E16738-3
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/03/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9159.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89 %		86-118 %
2037-26-5	Toluene-D8	102 %		88-110 %
460-00-4	4-Bromofluorobenzene	98 %		86-115 %

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ND = Not detected
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120396-PK-004
Lab Sample ID: E16738-4
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/03/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9160.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

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ND = Not detected

RDL = Reported Detection Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates that analyte is found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120396-PK-004
Lab Sample ID: E16738-4
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/03/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9160.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		86-118%
2037-26-5	Toluene-D8	101%		88-110%
460-00-4	4-Bromofluorobenzene	98%		86-115%

ND = Not detected

RDL = Reported Detection Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates that analyte is found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120496-PK-005
Lab Sample ID: E16738-5
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/04/96
Date Received: 12/05/96
Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9161.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

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ND = Not detected

RDL = Reported Detection Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates that analyte is found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120496-PK-005
Lab Sample ID: E16738-5
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/04/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9161.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		86-118%
2037-26-5	Toluene-D8	103%		88-110%
460-00-4	4-Bromofluorobenzene	94%		86-115%

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ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Report of Analysis

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Client Sample ID: GW-120496-PK-006
Lab Sample ID: E16738-6
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/04/96
Date Received: 12/05/96
Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9162.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

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ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

**ACCUTEST.****Report of Analysis**

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Client Sample ID: GW-120496-PK-006
Lab Sample ID: E16738-6
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/04/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9162.D	1	12/05/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		86-118%
2037-26-5	Toluene-D8	101%		88-110%
460-00-4	4-Bromofluorobenzene	97%		86-115%

13

ND = Not detected

RDL = Reported Detection Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates that analyte is found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

Page 1 of 2

Client Sample ID: GW-120496-PK-007
Lab Sample ID: E16738-7
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/04/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9163.D	1	12/06/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	1.5	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	8.4	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

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ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Report of Analysis

Page 2 of 2

Client Sample ID:	GW-120496-PK-007	Date Sampled:	12/04/96
Lab Sample ID:	E16738-7	Date Received:	12/05/96
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260		
Project:	Ecolab		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9163.D	1	12/06/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		86-118%
2037-26-5	Toluene-D8	101%		88-110%
460-00-4	4-Bromofluorobenzene	92%		86-115%

15

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Report of Analysis

Page 1 of 2

Client Sample ID: TRIP BLANK

Lab Sample ID: E16738-8

Matrix: AQ - Ground Water

Method: SW846 8260

Project: Ecolab

Date Sampled: 12/02/96

Date Received: 12/05/96

Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9164.D	1	12/06/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

16

ND = Not detected

RDL = Reported Detection Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates that analyte is found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

Page 2 of 2

Client Sample ID:	TRIP BLANK	Date Sampled:	12/02/96
Lab Sample ID:	E16738-8	Date Received:	12/05/96
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260		
Project:	Ecolab		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9164.D	1	12/06/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		86-118%
2037-26-5	Toluene-D8	106%		88-110%
460-00-4	4-Bromofluorobenzene	91%		86-115%

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ND = Not detected

RDL = Reported Detection Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates that analyte is found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

Page 1 of 2

Client Sample ID: GW-120496-PK-008
Lab Sample ID: E16738-9
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/04/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9165.D	1	12/06/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

18

ND = Not detected

RDL = Reported Detection Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates that analyte is found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

Page 2 of 2

Client Sample ID: GW-120496-PK-008
Lab Sample ID: E16738-9
Matrix: AQ - Ground Water
Method: SW846 8260
Project: Ecolab

Date Sampled: 12/04/96
Date Received: 12/05/96
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J9165.D	1	12/06/96	GTT	n/a	n/a	VJ474
Run #2							

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		86-118%
2037-26-5	Toluene-D8	101%		88-110%
460-00-4	4-Bromofluorobenzene	93%		86-115%

19

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound

GC/MS

SUPPORT DATA SUMMARY

GC/MS METHODOLOGY SUMMARY

VOLATILE ORGANIC METHOD 8260

This method can be summarized as follows: For low level contamination, an insert gas is bubbled through 5ml sample. The purgeables are efficiently transferred from the aqueous phase to the vapor phase. The vapor is swept through a sorbent column where the purgeables are trapped. When purging is complete, the sorbent tube is heated and backflushed with helium to desorb trapped sample components. The analytes are desorbed directly to a large bore capillary on capillary precolumn before being flash evaporated to a narrow bore capillary for analysis.

The column is temperature programmed to separate the analytes which are then detected with a mass spectrometer (MS) interfaced to the gas chromatograph. Wide bore capillary columns require a jet separator, whereas narrow bore capillary columns can be directly interfaced to the ion source.

Analytes eluted from the capillary column are introduced into the mass spectrometer via a jet separator or a direct connection. Identification of target analytes is accomplished by comparing their mass spectra with the electron impact spectra of authentic standard. Quantitation is accomplished by comparing the response of a major (quantitation) on relative to internal standard with a five-point calibration curve.



GC/MS Analysis Case Narrative/Conformance/Non-Conformance Summary

Fraction: VOLATILE

	NO	YES
1. Chromatograms Labeled/Compounds Identified. (Field Samples and Method Blanks)	[]	[<input checked="" type="checkbox"/>]
2. GC/MS Tune Meet Criteria.	[]	[<input checked="" type="checkbox"/>]
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.	[]	[<input checked="" type="checkbox"/>]
4. GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of samples analysis for 600 series and 12 hours for 8000 series.	[]	[<input checked="" type="checkbox"/>]
5. GC/MS Calibration Requirements		
a. Calibration Check Compounds	[]	[<input checked="" type="checkbox"/>]
b. System Performance Check Compounds	[]	[<input checked="" type="checkbox"/>]
6. Blank Contamination	[<input checked="" type="checkbox"/>]	[]

If yes, list compounds and in each blank: _____

7. Surrogate Recoveries Meets Criteria. [] [☒]

If not met, list those samples which fall outside the acceptable range and confirmed by reanalysis: _____

8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria. [] [☒]

If not met, refer to MSMSD and blank spike summaries: _____

9. Internal Standard Area/Retention Time Shift Meet Criteria [] [☒]

If not met, list those samples which fall outside the acceptable range and confirmed by reanalysis: _____

10. Extraction Holding Time Met [] [NA]

If not met, list number of days exceeded for each sample: _____

11. Analysis Holding Time Met [] [☒]

If not met, list number of days exceed for each sample: _____

Additional Comments: _____

QC Review Signature: Norman Coyle

Date: 12/17/96

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2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ACCUTEST Contract: NA
Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

	A SAMPLE SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
1	MB	91	100	97	0
2	E16738-1	88	103	91	0
3	E16738-2	87	101	98	0
4	E16738-3	89	102	98	0
5	E16738-4	88	101	98	0
6	E16738-5	89	103	94	0
7	E16738-6	92	101	97	0
8	E16738-7	90	101	92	0
9	E16738-8	89	106	91	0
0	E16738-9	87	101	93	0

QC LIMITS

SMC1 = dibromofluoromethane (s) (88-118)
SMC2 = toluene-d8 (s) (88-110)
SMC3 = 4-bromofluorobenzene (s) (88-115)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D System Monitoring Compound diluted out

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ACCUTEST Contract: NA
Lab Code: NA Case No.: NA SAS No.: NA SDG No.: NA

	A SAMPLE SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
1	MB1	88	100	94	0
2	E16738-9MS	96	102	92	0
3	E16738-9MSD	93	101	96	0
4	BS	93	105	89	0
5	E16727-1	92	102	92	0

		QC LIMITS
SMC1	▪ dibromofluoromethane (s)	(88-118)
SMC2	▪ toluene-d8 (s)	(88-110)
SMC3	▪ 4-bromofluorobenzene (s)	(86-115)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D System Monitoring Compound diluted out

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: E16738
Account: CRAIL Conestoga-Rovers & Associates
Project: Ecolab

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
E16738-9MS	J9176.D	1	12/06/96	GTT	n/a	n/a	VJ474
E16738-9MSD	J9177.D	1	12/06/96	GTT	n/a	n/a	VJ474
E16738-9	J9165.D	1	12/06/96	GTT	n/a	n/a	VI474

The QC reported here applies to the following samples:

Method: SW846 8260

E16738-1, E16738-2, E16738-3, E16738-4, E16738-5, E16738-6, E16738-7, E16738-8, E16738-9

CAS No.	Compound	E16738-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	49.4	99	54.9	110	10	1-267/14
71-43-2	Benzene	ND		50	49.3	99	47.9	96	3	83-110/16
75-27-4	Bromodichloromethane	ND		50	49.1	98	50.4	101	3	89-121/13
75-25-2	Bromoform	ND		50	46.3	93	50.6	101	9	86-120/15
108-90-7	Chlorobenzene	ND		50	52.0	104	50.5	101	3	89-113/13
75-00-3	Chloroethane	ND		50	53.2	106	48.3	97	10	85-136/17
67-66-3	Chloroform	ND		50	47.7	95	45.1	90	6	79-122/15
75-15-0	Carbon disulfide	ND		50	50.3	101	44.5	89	12	
56-23-5	Carbon tetrachloride	ND		50	45.8	92	42.0	84	9	79-127/19
75-34-3	1,1-Dichloroethane	ND		50	47.0	94	44.0	88	6	81-124/21
75-35-4	1,1-Dichloroethylene	ND		50	47.5	95	46.9	94	1	85-113/25
107-06-2	1,2-Dichloroethane	ND		50	49.9	100	50.1	100	0	85-124/12
78-87-5	1,2-Dichloropropane	ND		50	50.2	100	47.8	96	5	86-113/12
124-48-1	Dibromochloromethane	ND		50	49.1	98	50.9	102	4	89-122/11
156-69-4	cis-1,2-Dichloroethylene	ND		50	47.6	95	46.3	93	3	87-112/18
10061-01-5	cis-1,3-Dichloropropene	ND		50	48.2	96	47.7	95	1	93-113/11
156-60-5	trans-1,2-Dichloroethylene	ND		50	48.4	97	46.6	93	4	87-111/18
10061-02-6	trans-1,3-Dichloropropene	ND		50	43.9	88	45.6	91	4	85-107/12
100-41-4	Ethylbenzene	ND		50	54.9	110	50.1	100	9	87-113/17
591-78-6	2-Hexanone	ND		50	48.2	96	49.2	98	2	
108-10-1	4-Methyl-2-pentanone	ND		50	48.0	96	50.4	101	5	52-137/28
74-83-9	Methyl bromide	ND		50	49.2	98	42.7	85	14	80-129/16
74-87-3	Methyl chloride	ND		50	41.4	83	39.9	80	4	68-140/36
75-09-2	Methylene chloride	ND		50	48.6	97	47.3	95	3	80-118/19
78-93-3	Methyl ethyl ketone	ND		50	45.8	92	46.8	94	2	61-121/37
100-42-5	Styrene	ND		50	53.7	107	53.4	107	0	86-113/15
71-55-6	1,1,1-Trichloroethane	ND		50	44.9	90	43.4	87	3	80-122/21
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	50.8	102	53.2	106	5	82-114/19
79-00-5	1,1,2-Trichloroethane	ND		50	52.6	105	52.7	105	0	88-116/13
127-18-4	Tetrachloroethylene	ND		50	52.8	106	49.6	99	6	61-119/22
108-88-3	Toluene	ND		50	50.2	100	48.3	97	4	88-115/19
79-01-6	Trichloroethylene	ND		50	51.4	103	48.1	96	7	86-114/34
75-01-4	Vinyl chloride	ND		50	43.8	88	42.6	85	3	74-121/14
1330-20-7	Xylene (total)	ND		150	161	107	159	106	1	88-115/16

Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 2

Job Number: E16738
Account: CRAIL Conestoga-Rovers & Associates
Project: Ecolab

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
E16738-9MS	J9176.D	1	12/06/96	GTT	n/a	n/a	VJ474
E16738-9MSD	J9177.D	1	12/06/96	GTT	n/a	n/a	VJ474
E16738-9	J9165.D	1	12/06/96	GTT	n/a	n/a	VJ474

The QC reported here applies to the following samples:

Method: SW846 8260

E16738-1, E16738-2, E16738-3, E16738-4, E16738-5, E16738-6, E16738-7, E16738-8, E16738-9

CAS No.	Surrogate Recoveries	MS	MSD	E16738-9	Limits
1868-53-7	Dibromofluoromethane	96%	92%	87%	86-118%
2037-26-5	Toluene-D8	102%	101%	101%	88-110%
460-00-4	4-Bromofluorobenzene	92%	96%	93%	86-115%

Blank Spike Summary

Page 1 of 2

Job Number: E16738
Account: CRAIL Conestoga-Rovers & Associates
Project: Ecolab

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ474-BS	J9178.D	1	12/06/96	GTT	n/a	n/a	VJ474

The QC reported here applies to the following samples:

Method: SW846 8260

E16738-1, E16738-2, E16738-3, E16738-4, E16738-5, E16738-6, E16738-7, E16738-8, E16738-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	20	22.6	113	1-267
71-43-2	Benzene	20	21.3	106	83-110
75-27-4	Bromodichloromethane	20	21.1	106	89-121
75-25-2	Bromoform	20	18.9	94	86-120
108-90-7	Chlorobenzene	20	20.4	102	89-113
75-00-3	Chloroethane	20	22.0	110	85-136
67-66-3	Chloroform	20	19.5	98	79-122
75-15-0	Carbon disulfide	20	19.8	99	
56-23-5	Carbon tetrachloride	20	23.5	118	79-127
75-34-3	1,1-Dichloroethane	20	19.1	96	81-124
75-35-4	1,1-Dichloroethylene	20	19.4	97	85-113
107-06-2	1,2-Dichloroethane	20	21.2	106	85-124
78-87-5	1,2-Dichloropropane	20	21.2	106	86-113
124-48-1	Dibromochloromethane	20	19.7	98	89-122
156-69-4	cis-1,2-Dichloroethylene	20	18.7	94	87-112
10061-01-5	cis-1,3-Dichloropropene	20	19.7	98	93-113
156-60-5	trans-1,2-Dichloroethylene	20	19.8	99	87-111
10061-02-6	trans-1,3-Dichloropropene	20	18.1	90	85-107
100-41-4	Ethylbenzene	20	21.9	110	87-113
591-78-6	2-Hexanone	20	18.8	94	
108-10-1	4-Methyl-2-pentanone	20	20.0	100	52-137
74-83-9	Methyl bromide	20	19.6	98	80-129
74-87-3	Methyl chloride	20	20.1	100	68-140
75-09-2	Methylene chloride	20	19.0	95	80-118
78-93-3	Methyl ethyl ketone	20	19.9	100	61-121
100-42-5	Styrene	20	20.6	103	86-113
71-55-6	1,1,1-Trichloroethane	20	18.5	92	80-122
79-34-5	1,1,2,2-Tetrachloroethane	20	20.4	102	82-114
79-00-5	1,1,2-Trichloroethane	20	23.3	116	88-116
127-18-4	Tetrachloroethylene	20	22.7	114	61-119
108-88-3	Toluene	20	22.3	112	88-115
79-01-6	Trichloroethylene	20	21.8	109	86-114
75-01-4	Vinyl chloride	20	17.1	86	74-121
1330-20-7	Xylene (total)	60	66.4	111	88-115

Blank Spike Summary

Page 2 of 2

Job Number: E16738
Account: CRAIL Conestoga-Rovers & Associates
Project: Ecolab

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ474-BS	J9178.D	1	12/06/96	GTT	n/a	n/a	VJ474

The QC reported here applies to the following samples:

Method: SW846 8260

E16738-1, E16738-2, E16738-3, E16738-4, E16738-5, E16738-6, E16738-7, E16738-8, E16738-9

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	86-118%
2037-26-5	Toluene-D8	105%	88-110%
460-00-4	4-Bromofluorobenzene	89%	86-115%

Method Blank Summary

Page 1 of 2

Job Number: E16738

Account: CRAIL Conestoga-Rovers & Associates

Project: Ecolab

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ474-MB	J9154.D	1	12/05/96	GTT	n/a	n/a	VJ474

The QC reported here applies to the following samples:

Method: SW846 8260

E16738-1, E16738-2, E16738-3, E16738-4, E16738-5, E16738-6, E16738-7, E16738-8, E16738-9

CAS No.	Compound	Result	RDL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.47	ug/l	
75-27-4	Bromodichloromethane	ND	0.31	ug/l	
75-25-2	Bromoform	ND	0.97	ug/l	
108-90-7	Chlorobenzene	ND	0.40	ug/l	
75-00-3	Chloroethane	ND	1.5	ug/l	
67-66-3	Chloroform	ND	0.44	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.48	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.42	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.40	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.85	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.54	ug/l	
124-48-1	Dibromochloromethane	ND	0.43	ug/l	
156-69-4	cis-1,2-Dichloroethylene	ND	0.79	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.35	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.65	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.46	ug/l	
100-41-4	Ethylbenzene	ND	0.36	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	1.2	ug/l	
74-83-9	Methyl bromide	ND	0.92	ug/l	
74-87-3	Methyl chloride	ND	0.77	ug/l	
75-09-2	Methylene chloride	ND	1.1	ug/l	
78-93-3	Methyl ethyl ketone	ND	1.0	ug/l	
100-42-5	Styrene	ND	0.37	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.38	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	0.60	ug/l	
108-88-3	Toluene	ND	0.36	ug/l	
79-01-6	Trichloroethylene	ND	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
1330-20-7	Xylene (total)	ND	0.62	ug/l	

Method Blank Summary

Page 2 of 2

Job Number: E16738
Account: CRAIL Conestoga-Rovers & Associates
Project: Ecolab

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ474-MB	J9154.D	1	12/05/96	GTT	n/a	n/a	VJ474

The QC reported here applies to the following samples:

Method: SW846 8260

E16738-1, E16738-2, E16738-3, E16738-4, E16738-5, E16738-6, E16738-7, E16738-8, E16738-9

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	91% 86-118%
2037-26-5	Toluene-D8	100% 88-110%
460-00-4	4-Bromofluorobenzene	97% 86-115%

CRACONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933SHIPPED TO (Laboratory Name): *Accu-test, N.J.*

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

9234

PROJECT NAME: *Ecolab*SAMPLER'S
SIGNATURE:*Pat Klick*PRINTED
NAME:*Pat Klick*

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	NO. OF CONTAINERS	PARAMETERS	REMARKS
1	12/3/96	1540	GW-120396-PK-001 E16738-1	Water	3	✓	48 hour
2		1555	GW-120396-PK-002		3	✓	turnaround
3		1645	GW-120396-PK-003		3	✓	
4	✓	1725	GW-120396-PK-004		3	✓	
5	12/4/96	1125	GW-120496-PK-005		3	✓	
6		1205	GW-120496-PK-006		3	✓	
7	✓	1240	GW-120496-PK-007		2	✓	
	12-4-96	1730	Trip Blank		2	✓	
			Temperature Blank		1	✓	
8	12/4/96	1345	GW-120496-PK-008	✓	3	✓	
TOTAL NUMBER OF CONTAINERS						27	

SAMPLES RECEIVED ON ICE AT ACCUTEST

COMM C

RELINQUISHED BY:

①

Pat Klick

DATE: 12/4/96

TIME: 1200

RECEIVED BY:

②

F. D. S. S. L.

DATE:

TIME:

RELINQUISHED BY:

②

F. D. S. S. L.

DATE: 12-5-96

TIME: 0530

RECEIVED BY:

③

F. D. S. S. L.

DATE: 12-5-96

TIME: 0530

RELINQUISHED BY:

③

DATE:

TIME:

RECEIVED BY:

④

DATE:

TIME:

METHOD OF SHIPMENT:

Fed Ex

AIR BILL No.

87547 60136

White:

Yellow:

Pink:

Goldenrod:

-Fully Executed Copy

-Receiving Laboratory Copy

-Shipper Copy

-Sampler Copy

SAMPLE TEAM:

Klick

RECEIVED FOR LABORATORY BY:

DATE:

TIME:

2498

